

Galaxy

JUNE 1952

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SCIENCE FICTION

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JUNE 1952

GALAXY

Science Fiction

"THE RAT RACE"

By Jay Franklin



**The Next Full Length Galaxy Science
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When an atomic explosion destroys the battleship Alosko, Lt. Commander Frank Jacklin returns to consciousness in New York and is shocked to find himself in the body of Winnie Tomkins, a dissolute stockbroker. Unable to explain his real identity, Jacklin attempts to fit into Tomkin's way of life. Complications develop when Jacklin gets involved with Tomkin's wife, his red-haired mistress and his luscious secretary. Three too many women for Jacklin to handle.

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RANDOM NOTES

ORDINARILY, this is the time of year when the past six issues are rated. If this practice makes sense, I wish someone would explain how.

There are so many unfair aspects that I don't see why writers insist on it. A story that places low in one issue could very possibly have been high in the next. Even if all are masterpieces, giving them orders of preference means a descending scale of apparent approval. A topical subject can put a story ahead of one whose appeal will outlast it. Also, readers change their minds, a factor that cannot affect the rating of an issue until too late.

The final point is that writers are generally frustrated when they find their best efforts down at the bottom for any of these unpredictable reasons.

Since writers understandably want to know how their work is received, let me suggest a compromise that seems more logical:

Suppose we rate favorites over the six issues that comprise a volume. That gives us a minimum of thirty stories to evaluate, in which there will be enough representatives of all categories to make comparison intelligible. It

will, in addition, give every story a chance to be judged against those in other issues. Whether you think the listing should be in order of preference is up to you.

Let's have your opinion.

And, of course, your choices from October 1951 to March 1952. Add anything else you care to—whether GALAXY is slipping or improving, what types of fiction you prefer and so forth. All these are valuable in establishing and continuing—or revising, when necessary—an editorial policy.

TWO sources of gratification: the enthusiastic reception of Willy Ley's department and *The Demolished Man*. Offering an answer to every question submitted resembles uncapping a geyser; the mail is flooding in handsomely. But Mr. Ley, undaunted, invites still more. Our single request is that you put your questions on one sheet of paper, your letter to GALAXY, if any, on another, and your name and address on both. They'll be withheld if you want, but we'd like to keep our files in systematic shape.

The Demolished Man created more comment than any science

fiction novel in years: Elmer Davis discussed it in a radio broadcast; dozens of writers wrote dazzled letters; hundreds of readers poured appreciation over the story; bidding for book publication was brisk, with Shasta Publishers copping the contract with a spectacular (and deserved) advance, and arrangements are being made for eventual paperback reprint.

Alfred Bester, author of *The Demolished Man*, is 39, six feet, 190 pounds, married to a radio and TV actress named Rollie who matches his kilowatt output despite being a much smaller dynamo. A literary perfectionist, Bester is kept so busy writing radio and TV scripts that science fiction is in the nature of a vacation for him.

Note to impatient authors: for all his grasp of technique, he spent a year and a half working on *The Demolished Man*!

Several other Bester stories are in the works for GALAXY. He also intends to do a novel every year or two, and GALAXY, of course, will see them first.

STARTING this month, *Gravy Planet* by Frederik Pohl and C. M. Kornbluth should also be a landmark in science fiction—it's brilliant as a blaze in a fireworks factory, suspenseful as crossing Niagara Falls on a tight wire.

Frederik Pohl is 32, a bit over six feet, about 165 pounds, tied to a literary agency that bears his name and keeps him from making his rightful contribution to science fiction. This is the first time he has ever written under his own name; his list of pseudonyms comes to no less than a dozen. He has promised to contribute regularly to future issues.

C. M. Kornbluth is also 32, about five feet eight, around 175 pounds, married, has a very new baby—his biography was recorded some months ago, so there is no need to repeat it here.

He is a steady contributor to GALAXY.

The literary philosophy behind *Gravy Planet* is one I'm fond of: what would happen if any given situation is carried to the utmost extremes we are capable of imagining?

The result may or may not ever come true; that's not the point. Neither is approval or disapproval—the situation must be viewed purely in terms of its contemporaries.

We are no more fitted to judge future environments than a Crusader who, if brought to the present, would be enraged to find that the war against the Saracens had been abandoned.

GALAXY is proud to present *Gravy Planet*.

—H. L. GOLD

gravy planet

By FREDERIK POHL & C. M. KORNBLUTH

BEGINNING A THREE-PART SERIAL



A Utopia is an ideal society, of course, but what constitutes Utopia depends on whose ideals are being gratified. Here, for instance, is a perfect society which is generally overlooked!

Illustrated

by DON SHILEY



GRAY PLANET

AS I dressed that morning, I ran over in my mind the long list of statistics, evasions and exaggerations that they would expect in my report. My section — Production — had been plagued with a long series of illnesses and resignations, and you can't get work done without people to do it. But the Board wasn't likely to take that as an excuse.

I rubbed the depilatory soap over my face and rinsed it with the trickle from the fresh-water tap. Wasteful, of course, but I could afford the cost, and salt water always leaves my face itchy. Before the last of the stubble was washed away, the trickle stopped and didn't start again. I swore a little and finished rinsing with salt. It had been happening lately; some people blamed Connie saboteurs. Loyalty raids were being held throughout the New York Water Supply Corporation, but so far they hadn't changed the damned water situation. Very annoying, considering the price of fresh water—you'd think the company would protect its customers.

The morning newscast over the shaving mirror caught me for a moment . . . the President's last-night speech, a brief glimpse of the Venus rocket, squat and silvery on the Arizona sand, rioting in Panama . . . I switched it off

when the quarter-hour time signal chimed over the audio band.

It looked as though I was going to be late again, which certainly would not help mollify the Board.

I saved five minutes by wearing yesterday's shirt and by leaving my breakfast juice to grow warm and sticky on the table. But I lost the five minutes by trying to call Kathy. She didn't answer the phone. "And I was late getting into the office.

FORTUNATELY — and unprecedentedly — Fowler Schocken was late too.

In our office it was Fowler's custom to hold Board conferences fifteen minutes before the regular opening of the business day. It kept the clerks and stenos on their toes, and it was no hardship to Fowler. He spent every morning in the office anyway: "morning" to him began with the rising of the Sun.

Today, though, I had time to get my secretary's summary off my desk before the meeting. When Fowler Schocken walked in with a courteous apology for his tardiness, I was sitting in my place at the foot of the table, reasonably relaxed and as sure of myself as a Fowler Schocken Associate was ever likely to be.

"Good morning," Fowler said and the eleven of us made the proper murmur. He didn't sit

down; he stood gazing fondly as a father at us for about a minute and a half. Then he looked carefully and delightedly about the room.

"I've been thinking about our conference room," he said, and we all looked around at it. The room wasn't big, it wasn't small: say ten by twelve. But it was cool, well-lighted and most imposingly furnished. The air recirculators were cleverly hidden behind animated friezes; the carpeting was thick and soft; and every piece of furniture was constructed from top to bottom of authentic, expertized, genuine tree-grown wood.

Fowler Schocken said: "We have a nice conference room here, men, as we should have—Fowler Schocken Associates is the largest advertising agency in the city. We bill a megabuck a year more than anybody else around. And —" he looked around at all of us— "I think you'll agree that we all find it worth while. I don't believe there's a person in this room who has less than a two-room apartment." He twinkled at me. "Even the bachelors. Speaking for myself, I've done well. My summer place looks right over one of the largest parks on Long Island. I haven't tasted any protein but new wheat for years and when I go out for a spin I pedal a Cadillac. The wolf is a

long way from my door. And I think any one of you can say the same. Right?" The hand of our Director of Market Research shot up and Fowler nodded at him: "Yes, Matthew?"

Matt Runstead knew which side his bread was oiled on. He glared belligerently around the table. "I just want to go on record as agreeing with Mr. Schocken one hundred per cent—all the way!"

"Thank you, Matthew." It took Fowler Schocken a moment before he could go on. "Well, we all know what put us where we are. We remember the Starrzelius Verily account, and how we put Industries on the map. The first spherical trust. Merging a whole subcontinent into a single manufacturing complex. Schocken Associates pioneered on both of them. Nobody can say we were floating with the tide. But that's behind us.

"Men, I want to know something. You can tell me truthfully—are we getting soft?" He took time to look at each of our faces searchingly, ignoring the forest of hands in the air. Mine was right up there, too. Then he waved to the man at his right. "You first, Ben."

Ben Winston stood up and baritoneed: "Speaking for Industrial Anthropology, no! Listen to today's progress report—you'll

get it in the noon bulletin, but let me brief you now. According to the midnight indices, all primary schools east of the Mississippi are now using our packaging recommendation for the school lunch program. Soyaburgers and generated steak are shrewdly packed in containers the same shade of green as the Universal products, to transfer unconsciously the distaste to our competition. But the candy, ice cream and kiddiebutt cigarette ration are wrapped in colorful Starrzelius red. When those little consumers grow up . . ." He lifted his eyes exultantly from his notes. "According to our extrapolation, fifteen years from now Universal products will be bankrupt and off the market entirely!"

He sat down in a wave of applause. Schocken clapped, too, and looked brightly at the rest of us. I leaned forward with Expression One—eagerness, intelligence, competence—all over my face. But I needn't have bothered. Fowler pointed to the lean man next to Winston. Harvey Bruner.

"I don't have to tell you men that Point-of-Sale has its special problems," Harvey said, puffing his thin cheeks. "I swear, the whole damned government must be infiltrated with Connies!" He was beginning to get hysterical. "You know what they've done. They outlawed compulsive sub-

sonics in our auditory captive-audience advertising—but we've bounced back with a list of semantic cue words that tie in with every basic trauma and neurosis in American life today. They listened to the safety cranks and stopped us from projecting our messages on aircar windows, but Lab tells me—" he nodded to our Director of Research across the table—"that soon we'll be testing a system that projects direct on the retina of the eye.

"But we're not content with that. We're going forward. As an example I want to mention the Coffiest pro—" He broke off. "Excuse me, Mr. Schocken," he whispered. "Has Security checked this room?"

Fowler Schocken nodded. "Absolutely clean. Nothing but the usual State Department and House of Representatives spy-mikes. And of course we're feeding a canned playback into them."

Harvey relaxed again. "Well, about this Coffiest," he said. "We're sampling it in fifteen key cities. It's the usual offer—a thirteen-week supply of Coffiest, ten thousand dollars in cash and a weekend vacation on the Ligurian Riviera to everybody who comes in. But—and here's what makes this campaign truly great, in my estimation—each sample of Coffiest contains three milligrams of a

simple alkaloid. Nothing harmful, but definitely habit-forming. After ten weeks the customer is hooked for life. It would cost him at least fifty thousand dollars for a cure, so it's simpler for him to go right on drinking Coffiest—three cups with every meal and a pot beside his bed at night, just as it says on the jar."

Fowler Schocken beamed and I braced myself into Expression One again. Next to Harvey sat Tildy Mathis, Chief of Personnel and hand-picked by Schocken himself. He didn't ask women to speak at Board sessions, and next to Tildy sat me. But Fowler let me down with a smile.

He said: "I won't ask every section to report. We haven't the time. But you've given me your answer, gentlemen. It's the answer I like. You've met every challenge up to now. I want to give you a new challenge."

He pressed a button on his monitor panel and swiveled his chair around. The lights went down in the room; the projected art calendar (executives only) that hung behind Schocken's chair faded and revealed the mottled surface of the screen. On it another picture began to form.

I HAD seen that picture once before, that same day, in the news screen over my shaving mirror.

It was the Venus rocket, a thousand-foot monster, the bloated child of the slim V-2s and stubby Moon rockets of the past. Around it was a scaffolding of steel and aluminum, a-crawl with tiny figures that manipulated minute, blue-white welding flames. The picture was obviously recorded; it showed the rocket as it had been weeks or months ago in an earlier stage of construction, not poised as if ready for takeoff, the way I had seen it earlier.

A voice from the screen said triumphantly and inaccurately: "This is the ship that spans the stars!" I recognized the voice as belonging to one of the organ-toned commentators in Aural Effects and expertized the script without effort as emanating from one of Tildy's girl copywriters. The talented slovenliness that would confuse Venus with a star had to come from somebody on her staff.

"This is the ship that a modern Columbus will drive through the void," said the voice. "Six and a half million tons of trapped lightning and steel—an ark for eighteen hundred men and women, and everything to make a new world for their home. Who will be in it? What fortunate pioneers will tear an empire from the rich, fresh soil of another world?"

"Let me introduce you to them—a man and his wife, two of the intrepid . . ."

The voice kept going. On the screen, the picture dissolved to a spacious suburban roomette in early morning—the husband folding the bed into the wall and taking down the partition to the children's nook; the wife dialing breakfast and erecting the table. Over the breakfast juices and the children's pabulum (with a steaming mug of Coffeeet for each, of course) they spoke persuasively to each other about how wise and brave they had been to apply for passage in the Venus rocket. And the closing question of their youngest babbler ("Mommy, when I grow up kin I take my boys and girls to a place as nice as Venus?") cued the switch to a highly imaginative series of shots of Venus as it would be when the child grew up—verdant valleys, crystal lakes, brilliant mountain vistas.

THE commentary did not deny, and neither did it dwell on, the decades of hydroponics and life in hermetically sealed cabins that the pioneers would have to endure while working on Venus's unbreathable atmosphere and waterless chemistry.

Instinctively I had set the timer button on my watch as the

picture started. When it was over, I read the dial: nine minutes, three times as long as any commercial could legally run!

It was only after the lights were on again, the cigarettes lit and Fowler Schocken well into his pep talk for the day that I saw the answer. He called our attention to the history of advertising—from the simple handmaiden task of selling already manufactured goods to its present role of creating industries and redesigning a world's folkways to meet the needs of commerce. He touched once more on what we ourselves, Fowler Schocken Associates, had done with our own expansive career. And then he said:

"There's an old saying, men, 'The world is our oyster.' We've made it come true. But we've eaten that oyster. We've actually and literally conquered the world. Like Napoleon, we weep for new worlds to conquer. And *there*—" he waved at the screen behind him—"you have just seen the first of those worlds."

I have never liked Matt Runstead, as you may have gathered. He is a Paul Pry whom I suspect of wiretapping even within the company. He must have spied out the Venus project well in advance, because not even the most talented reflexes could have brought out his little speech.

While the rest of us were still busy assimilating what Fowler Schocken had told us, Runstead was leaping to his feet.

"Gentlemen," he said with passion, "this is truly the work of genius. Not just India, not just a commodity, but a *whole planet to sell*! I salute you, Fowler Schocken—the Clive, the Bolivar, the John Jacob Astor of a new world!"

Matt was first, as I say, but every one of us got up and said in turn about the same thing. Including me. Kathy had never understood it and I'd tried to explain that it was a religious ritual—like the champagne bottle at a ship's launching, or the sacrifice of the virgin to the corn crop. I don't think any of us, except maybe Matt Runstead, would feed habit-forming narcotics to the world for money alone. There was a high ideal behind it—production for use and profit. With our enormously advanced technology, we could produce more coffee, to mention just one item out of the innumerable roster of foods and goods and services, than the world could *normally* consume. Our sacred task was to keep the demand right in step with the supply—not an easy one if you consider the flood of things produced on farms and in factories.

But we did it! By Morgan, we

did it and we were proud to be able to!

WHEN all of us had done, Fowler Schocken touched another button and showed us a chart.

He explained it carefully item by item. He showed us tables and graphs and diagrams of the entire new Department of Fowler Schocken Associates which would be set up to handle the development and exploitation of the planet Venus. He covered the tedious lobbying and friend-making in Congress which had given us the exclusive right to build up and profit from the planet, and I began to see how he could safely use a nine-minute commercial. He explained how the Government naturally wanted Venus to be an American planet and how they had invoked our American supremacy in advertising to make it possible.

As he spoke, we all caught some of his fire. I envied the man who would head the Venus Section; any one of us would have committed even a commercial offense to get the job.

He spoke of trouble lining up the Senator from DuPont Chemicals with his 45 votes, and of an easy triumph over the Senator from Nash-Kelvinator with his six. He spoke proudly of a faked Connie demonstration against

Fowler Schocken which had lined up the anti-Connie Secretary of the Interior.

Visual Aids had done a beautiful job of briefing the information, but we were there nearly an hour looking at the charts and listening to Fowler's achievements and plans.

But finally he clicked off the projector and said: "There you have it. That's our new campaign. And it starts right away—now. I have only one more announcement to make and then we can all get to work."

Fowler Schocken is a good showman. He took the time to find a slip of paper and read from it a sentence that the lowest of our copyboys could deliver off the cuff. "The chairman of the Venus Section," he read, "will be Mitchell Courtenay."

And that was the biggest surprise of all, because Mitchell Courtenay, five feet eleven inches tall, sandy-haired, moderately good-looking except for a nose that was pushed a little off center—is me.

II

I LINGERED with Fowler for three or four minutes while the rest of the Board went back to their offices, and the elevator ride down from the Board room to my own office on the eighty-

sixth floor took a few seconds, so Hester was already clearing out my desk when I arrived.

"Congratulations, Mr. Courtenay," she said. "You're moving to the eighty-ninth now. Isn't it wonderful? And I'll have a private office, too!"

I thanked her and picked up the phone over the desk, staying out of her way. The first thing I had to do was get my staff in and turn over the reins of Production; Tom Gillespie was next in line. But the first thing I *did* do was to dial Kathy's apartment again. There was still no answer, so I called in the boys.

They were properly sorry to see me go and properly delighted about everybody moving up a notch.

And then it was lunch time, so I postponed the problem of the planet Venus until the afternoon.

I made a phone call, ate quickly in the company cafeteria, took the elevator down to the shuttle and the shuttle south for sixteen blocks. Coming out, I found myself in the open air for the first time that day and reached for my anti-soot plugs, but didn't put them in. The light rain had temporarily washed the air clean. It was summer, hot and sticky; the hordes of people crowding the sidewalks were as anxious as I to get back inside a building. I had to bulldoze my

way across the street and into the lobby.

The elevator took me up fourteen floors. It was an old building with imperfect air conditioning; I felt a chill in my damp suit. It occurred to me to use that instead of the story I had prepared, but I decided against it.

A girl in a starched white uniform looked up as I walked into the office. I said: "My name is Silver. Walter P. Silver. I have an appointment."

"Yes, Mr. Silver," she remembered. "Your heart. You said it was an emergency."

"That's right. It's probably psychosomatic, but I felt—"

"Of course." She waved me to a chair. "Dr. Nevin will see you in just a moment."

It was ten minutes. A young woman came out of the doctor's office and a man who had been waiting in the reception room before me went in; then he came out and the nurse said to me: "Will you go into Dr. Nevin's office now?"

I went in. Kathy, very trim and handsome in her doctor's smock, was putting a case chart in her desk. When she straightened up, she said, "Oh, Mitch!" in a very annoyed tone.

"I told only one lie," I said. "I gave the girl a phony name. But it is an emergency. And my heart is involved."

There was a faint impulse toward a smile, but it didn't quite reach the surface. "Not medically," she said.

"I told her it was probably psychosomatic. She said to come in anyhow."

"I'll speak to her about that. Mitch, you know I can't see you during working hours. Now please—"

I sat down next to her desk. "You won't see me any time, Kathy. What's the trouble?"

"Nothing's the trouble. Please go away, Mitch. I'm a doctor; I have work to do."

"Nothing as important as this. Kathy, I tried to call you all last night and all this morning."

She struck a cigarette without looking at me. "I wasn't home."

"No, you weren't. I don't suppose I have the right to ask my own wife where she spends her time, do I?"

"Damn it, Mitch, you know—" Her phone rang. She screwed her eyes shut for a moment. Then she picked up the phone, leaning back in her chair, looking across the room, relaxed, a doctor soothing a patient. It took only a few moments. But when it was all over, she was entirely self-possessed.

"Please go away," she said, stubbing out her cigarette.

"Not until you tell me when you'll see me."

"I . . . haven't time to see you. I'm not your wife. You have no right to bother me like this. I could have you enjoined or arrested."

"My certificate's on file," I reminded her.

"Mine isn't. It never will be. As soon as the year is up, we're through, Mitch."

"There was something I wanted to tell you." Kathy had always been reachable through curiosity.

Instead of saying again, "Please go away," she said, "Well, what is it?"

"It's something big. It calls for a celebration. And I'm not above using it as an excuse to see you for just a little while tonight. Please, Kathy—I love you very much and I promise not to make a scent."

"Well—" While she was thinking, her phone rang. "All right," she said. "Call me at home. Seven o'clock. Now let me take care of the sick people."

She picked up the phone. I let myself out of her office while she was talking, and she didn't look after me.

FOWLER SCHOCKEN was hunched over his desk as I walked in. He was staring at the latest issue of *Taunton's Weekly*. The magazine was blinking in full color as the triggered mole-

cules of its inks collected photons by dribbets and released them in bursts. He waved the brilliant pages at me and asked: "What do you think of this, Mitch?"

"Sleazy advertising," I said promptly. "If we had to stoop so low as to sponsor a magazine like Taunton Associates, I think I'd resign. It's too cheap a trick."

He put the magazine face down; the flashing inks gave one last burst and subsided as their light source was cut off.

"Yes, it's cheap," he said thoughtfully. "But you have to give them credit for enterprise. Taunton gets sixteen and a half million readers for his ads every week. Nobody else's—just Taunton clients. And I hope you didn't mean that literally about resigning. I just gave Harvey the go-ahead on Schock. The first issue comes out in the fall, with a print order of twenty million."

He mercifully held up his hand to cut off my stammering try at an explanation. "I understood what you meant, Mitch. You were against cheap advertising. So am I. Taunton is to me the epitome of everything that keeps advertising from finding its rightful place with the clergy, medicine and the bar in our way of life. There isn't a shoddy trick he wouldn't pull, from bribing a judge to stealing away an employee. And, Mitch, he's a man

you'll have to watch."

"Why? I mean, why particularly?"

Schocken chuckled. "Because we stole Venus from him. It wasn't easy to persuade the Government that it should be our baby."

"I see," I said, and I did. Our representative government now is more representative than it has ever been before in history. It is not, of course, representative *per capita*, but it most surely is *ad valorem*, which is the only realistic way to govern a country. A citizen's vote must be weighed in the same way as a member of a family exerts influence—according to his wisdom and success. His power, in other words. Just as the head of a family makes its decisions because he bears the most responsibility and the ability to enforce his decisions, a nation must, obviously, be governed by its leaders. This has always been true in fact. Ours is the first civilization, however, which admits the reality of the situation and applies the correct solution with admirably logical practicality.

One thing was bothering me. "Won't Taunton be likely to take—well, direct action?"

"Oh, he'll try to steal it back," Fowler said mildly.

"That's not what I mean. You remember what happened with

Antarctic Exploitation."

"I was there. A hundred and forty casualties on our side. God knows what they lost."

"And that was only one continent. Taunton takes these things pretty personally: If he filed a feud over that, won't he do it for a whole planet?"

Fowler said patiently, "No, Mitch. He wouldn't dare. In the first place, industrial feuds are expensive. Preliminary hearings alone can tie up the whole legal staff for weeks, when we get through with our injunctions and counter-claims. In the second place, he doesn't have grounds—this is a legal, perfectly open-and-aboveboard assignment by the Incorporated Government of the United States of America; he can't question it. In the third place, we'd whip his tail off."

"I guess you're right," I admitted. It was just as well, as far as I'm concerned. Believe me, I'm a loyal employee of Fowler Shocken Associates; ever since cadet days I have tried to live my life "for Company and for Sales." But industrial feuds can be pretty messy. Our profession has been comparatively free of them—reasonable men can talk these things out nine times out of ten. But it was only a few decades ago, back in 2039, that a small but highly effective advertising agency in London filed a feud

against one of our bigger competitors, wiping out every executive on the staff. And they say there are still bloodstains on the steps of the General Post Office where two delivery companies had fought it out for the Federal Postal Contract, which, like the Armed Services, national and local police forces and other former government agencies, are let to private enterprise as they should be.

Schocken was speaking again; my attention whipped back. "There's one thing you'll have to watch for," he cautioned. "This is the kind of project that is bound to bring out the lunatic fringe. Every crackpot organization on the list, from the Connies themselves on down, is going to come out for or agin it. I don't care how you do it, but make sure they're all for. Butter them up. We don't want them to contend with as well as Taunton."

"Even the Connies?" I asked, astonished.

"Oh, no, Mitch. Don't bother with them; they're so discredited that they'd be more of a liability." His white hair glinted in the lamplight as he bobbed his head. "Maybe you could spread the word that space-travel is violently opposed to the principles of Conservationism. Uses up too many raw materials, hurts the general living standard—you

know, the usual unrealistic line. Bring in the fact that rocket fuel uses organic material that the Connies think should be made into fertilizer . . ."

I like to watch an expert at work. Fowler Schocken laid down a whole sub-campaign for me right there; I took it down and filled in the details. The Conservationists were fair game, those wild-eyed zealots who pretended that modern scientific method was not competent to meet with the demands of our expanding population and dwindling resources. I had been exposed to Connie sentiment in my time, and the arguments had always come down to one thing: Nature's way of living was the right way of living. If "Nature" had intended us to eat fresh vegetables, it wouldn't have given us niacin or thiamin chloride.

I sat still for twenty minutes more of Fowler Schocken's inspirational talk, and came away with the discovery that I had often made before: briefly and effectively, he had given me every fact and instruction I needed. The details he left to me; but I knew my job.

The government wanted Venus colonized by Americans. To accomplish this, three things were needed: colonists; a way of getting them to Venus; and something for them to do when they

got there in one piece.

The first was direct advertising. Schocken's TV commercial had blueprinted that, and it would be easy. It is always easy to persuade men and women—particularly American men and women who have pioneer blood in their veins—that the grass is greener far away. I had already penciled in a tentative campaign with the budget well under a megabuck. More would have been extravagant.

The second was only partly our problem. The ships had been designed—by Republic Aviation, Bell Telephone Labs and U. S. Steel, I believe, under Defense Corporation contract. Our job wasn't to make the transportation to Venus possible, but to make it palatable. When your wife found her burned-out toaster impossible to replace because its nichrome element was part of a Venus rocket's main drive jet, or when the inevitable disgruntled Congressman for a small and frozen-out firm waved an appropriations sheet around his head and talked about government waste on wildcat schemes, our job began: We had to convince your wife that rockets are more important than toasters; we had to convince the Congressman's constituent firm that its tactics were unpopular and would cost it profits.

I thought briefly of an austerity campaign and vetoed it. Our other accounts would suffer. But I needed something that would offer vicarious gratification to the eight hundred million who would not ride the rockets themselves.

I tabled that; Bruner could help me there. And I went on to point three. There had to be something to keep the colonists busy on Venus.

This, I knew, was what Fowler Schocken had his eye on. The government money that would pay for the basic campaign was a nice addition to our year's billing, but Fowler Schocken was too big for one-shot accounts. What we wanted was the year-after-year reliability of a major industrial account.

Fowler, of course, hoped to repeat on an enormously magnified scale our smashing success with Industries. His boards and he had organized all of India into a single giant cartel, with every last woven basket and iridium ingot it produced sold through Fowler Schocken advertising. Now he could do the same with Venus. *Potentially, it was worth as much as every dollar of value in existence put together!* A whole new planet, almost the size of Earth, in prospect as rich as Earth—and every micron, every milligram of it ours.

I looked at my watch. After

four; my date with Kathy was for seven. I just had barely time. I dialed Hester and had her get me space on the Washington jet while I put through a call to the name Fowler had given me. The name was Jack O'Shea; he was the only human being who had been to Venus—so far. His voice was young and cocky as he made an appointment to see me.

WE were five extra minutes in the landing pattern over Washington and then there was a hassle at the ramp. Brinks Express guards were swarming around our plane and their lieutenant demanded identification from each emerging passenger. When it was my turn, I asked what was going on. He looked at my low-number Social Security card thoughtfully and then saluted.

"Sorry to bother you, Mr. Courtenay," he apologized. "It's the Connie bombing near Topeka. We got a tip that the man might be aboard the 4:05 New York jet. Seems to have been a lemon."

"What Connie bombing was this?"

"DuPont Raw Materials Division—we're under contract for their plant protection, you know—was opening up a new coal vein under some cornland they own out there. They made a nice little

ceremony of it, and just as the hydraulic mining machine started ramming through the topsoil, somebody tossed a bomb from the crowd. Killed the machine operator, his helper and a vice president. He slipped away in the crowd, but he was identified. We'll get him one of these days."

"Good luck, Lieutenant," I said, and hurried on to the refreshment lounge.

O'Shea was waiting at a window seat, visibly annoyed, but he grinned when I apologized.

"It could happen to anybody," he said, and shrieked at a waiter. When we had placed our orders, he leaned back and said: "Well?"

I looked down at him across the table and looked away through the window. Off to the south, the gigantic pylon of the Hearst Memorial blocked its marker signal; behind it lay the tiny, dalled dome of the old Capitol. I, an ad man, was embarrassed, and O'Shea was enjoying it.

"Well?" he asked again, quite amusedly, and I knew he meant: "Now all of you have to come to me, and how do you like it for a change?"

I plunged. "I came for information," I said. "For instance: what's on Venus?"

"Sand and smoke," he said promptly. "Didn't you read my report?"

"Certainly. I want to know more."

"Everything's in the report. Jesus, they kept me in the interrogation room for three solid days when I got back! If I left anything out, it's gone permanently."

"That's not what I mean, Jack. Who wants to spend his life reading reports? I have fifteen men in Research doing nothing but digesting reports for me so I don't have to read them. I want to get the feel of the planet. There's only one place I can get it—because only one man's been there."

"And sometimes I wish I had not," O'Shea said wearily. "Well, where do I start? You know why they picked me—the only midget in the world with a pilot's license. And you know all about the ship. And you saw the assay reports on the samples I brought back. Not that they mean much. I only touched down once and five miles away the geology might be entirely different."

"I know all that. Look, Jack, put it this way. Suppose you wanted a lot of people to go to Venus. What would you tell them about it?"

He laughed. "I'd tell them a lot of damn big lies. Start from scratch, won't you? What's the deal?"

I gave him a fill-in on what Schocken Associates was up to,

while his round little face stared at me through his round little eyes. There is an opaque quality, like porcelain, to the features of a midget: as though the destiny that had made them small at the same time made them more perfect and polished than ordinary men, as if to show that their lack of size did not mean lack of completion. He sipped his drink and I gulped mine between paragraphs.

When my pitch was finished, I still didn't know whether he was on my side or not: Fowler had helped him to capitalize on his fame via testimonials, books and lectures, so he owed us a little gratitude and no more.

He said: "I wish I could help," and that made things easier.

"You can," I told him. "That's what I'm here for. Tell me what Venus has to offer."

"Damn little." A small frown chiseled across his lacquer forehead. "Where shall I start? Do I have to tell you about the atmosphere? There's free formaldehyde, you know — embalming fluid. Or the heat? It averages above the boiling-point of water — if there was any water on Venus, which there isn't. Not accessible, anyhow. Or the winds. I clocked five hundred miles an hour."

"Honestly, Jack, there are answers for all those things. I want

to get what you thought when you were there, how you reacted. Just start talking. I'll tell you when I've had what I wanted."

He dented his rose-marble lip with his lower teeth. "Well, let's start at the beginning. Get us another drink, won't you?"

The waiter took our order and came back with the liquor. Jack drummed on the table, sipped his rhine wine and seltzer, and began to talk.

He started way back, which was good. I wanted to know the elusive, subjective mood that underlay his technical reports on the planet Venus, the basic feeling that would put compulsion and conviction into the project.

He told me about his father, the six-foot chemical engineer, and his mother, the plump, strapping housewife. He made me feel their dismay and their ungrudging love for their thirty-five-inch son. He had been eleven years old when the subject of his adult life and work first came up. He remembered the unhappiness on their faces at his first, inevitable, off-hand suggestion about the circus. It was no minor tribute to them that the subject never came up again. It was a major tribute that Jack's settled desire to learn enough engineering and rocketry to be a test pilot had been granted, paid for and carried out in the face of every ob-

stacle of ridicule and refusal from the schools.

Of course Venus had made it all pay off.

The Venus rocket designers ran into one major complication. It had been easy enough to get a rocket to the Moon, a quarter-million miles away; theoretically, it was not much harder to blast one across space to the nearest other world, Venus. The question was one of orbits and time, of controlling the ship and bringing it back again.

They could blast the ship to Venus in days—at so squander-some a fuel expenditure that ten ships couldn't carry enough. Or they could ease it to Venus along its natural orbits as you might float a barge down a gentle river—which saved fuel, but lengthened the trip to months. A man in that length of time eats twice his own weight in food, breathes nine times his weight of air and drinks water enough to float a yawl. Closing the cycle with waste products is the answer, of course—only the equipment weighs more than the food, air and water. So the human pilot was out.

A team of designers went to work on an automatic pilot. When it was done it worked pretty well, and weighed four and one-half tons in spite of printed circuits and relays con-

structed under a microscope. The project stopped right there until somebody thought of that most perfect servo-mechanism: a sixty pound midget. A third of a man in weight, Jack O'Shea ate a third of the food, breathed a third of the oxygen. With minimum-weight, low-efficiency water- and air-purifiers, Jack came in just under the limit and thereby won himself undying fame.

He said broodingly, a little drunk from the impact of two weak drinks on his small frame: "They put me into the rocket like a finger into a glove. I guess you know what the ship looked like. But did you know they *ripped* me into the pilot's seat? It wasn't a chair, more like a diver's suit; the only air on the ship was in that suit; the only water came in through a tube to my lips. Saved weight . . ."

And the next eighty days were in that suit. It fed him, gave him water, removed his wastes. If necessary, it would have shot novocaine into a broken arm, tourniquetted a cut femoral artery or pumped air for a torn lung. It was a placenta, and a bidiously uncomfortable one.

In the suit thirty-three days going, forty-one coming back. The six days in between were the justification for the trip.

Jack fought his ship down through absolute blindness: gas

clouds that closed his own eyes and confused the radar, down to the skin of an unknown world. He was within a thousand feet of the ground before he could see anything but swirling yellow. And then he landed and cut the rockets.

"Well, I couldn't get out, of course," he went on. "For forty or fifty reasons, somebody else will have to be the first man to set foot on Venus. Somebody who doesn't care much about breathing, I guess. Anyway, there I was, looking at it." He shrugged his shoulders, looked baffled. "I've told it a dozen times at lectures, but I've never got it over. I tell 'em the closest thing to it on Earth was the Painted Desert. Maybe it was; I haven't been there.

"The wind blows *hard* on Venus and it tears up the rocks. Soft rocks blow away and make dust storms. The hard ones—well, they stick out in funny shapes and colors. Big monument things, some of them. And the most jagged hills and crevasses you can imagine. It's something like the inside of a cave, sort of, only not dark. But the light is—funny. Nobody ever saw light like that on Earth. Orangy-brownish light, brilliant, very brilliant, but sort of threatening. Like the way the sky is threatening in the summer around sun-

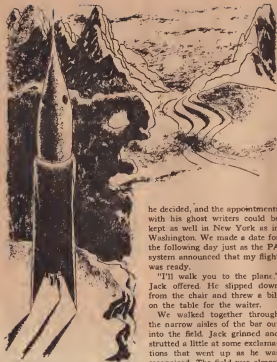
set just before a smasher of a thunderstorm. Only there never is any thunderstorm because there isn't a drop of water around."

He hesitated. "There is lightning. Plenty of it, but never any rain . . . I don't know, Mitch," he said abruptly. "Am I being any help to you at all?"

I looked at my watch and saw that the return jet was about to leave, so I bent down and turned off the recorder in my briefcase. (Turned, not clicked. Mercury switches.)

"You're being lots of help, Jack," I said. "But I'll need more. And I have to go now. Look, can you come up to New York and work with me for a while? I've got everything you said on tape, but I want visual stuff, too. Our artists can work from the pix you brought back, but there must be more. And you're a lot more use than the photographs for what we need." I didn't mention that the artists would be drawing impressions of what Venus would look like, if it were different from what it was. "How about it?"

Jack leaned back and looked cherubic, but, though he made me sweat through a brief recap of the extensive plans his lecture agent had made for his next few weeks, he finally agreed. The Shriners' talk could be canceled,



he decided, and the appointments with his ghost writers could be kept as well in New York as in Washington. We made a date for the following day just as the PA system announced that my flight was ready.

"I'll walk you to the plane," Jack offered. He slipped down from the chair and threw a bill on the table for the waiter.

We walked together through the narrow aisles of the bar out into the field. Jack grinned and strutted a little at some exclamations that went up as he was recognized. The field was almost dark, and the glow of Washing-



ton backlighted the silhouettes of hovering aircraft. Drifting toward us from the freight terminal was a huge cargo 'copter, a fifty-tonner, its cargo nacelle gleaming in colors as it reflected the lights below. It was no more than a hundred feet in the air, and I had to clutch my hat against the downdraft from its whirling vanes.

"Damn-fool bus drivers," Jack grunted, glaring up at the 'copter. "They ought to put those things on G.C.A. Just because they're maneuverable, those fan-jockies think they can take them anywhere. If I handled a jet the

way they— *Run!*" he suddenly was yelling at me.

I goggled at him; it was too sudden and disconnected to make any kind of sense. He lurched at me as a miniature body block and sent me staggering a few steps.

"What the hell?" I started to complain, but I didn't hear my own words. They were drowned out by a mechanical snapping sound and a flutter in the beat of the rotors and then the loudest crash I had ever heard as the cargo pod of the 'copter hit the concrete a yard from where we stood. It ruptured and spilled

cartons of Starrzelius Verily food packets. One of the crimson cylinders rolled to my toes and I stupidly picked it up and looked at it.

Overhead, the lightened 'copter fluttered up and away, but I didn't see it go.

"For God's sake, get it off them!" Jack was shrilling, tugging at me. We had not been alone on the field. From under the buckled aluminum reached an arm holding a briefcase, and through the compound noises in my ears I could hear a bubbling sound of human pain. I let Jack pull me to the tangled metal and we tried to heave it. I got a scratched hand and tore my jacket, and then the airport people got there and brusquely ordered us away.

I don't remember walking there, but by and by I found that I was sitting on someone's suitcase, back against the wall of the terminal, with Jack O'Shea talking excitedly to me. He was cursing all cargo 'copter pilots and blackguarding me for standing there like a fool when he'd seen the nacelle clamps opening, and a great deal more that I didn't get. I remember him knocking the red box of breakfast food from my hand impatiently. The company psychologists say I am not unusually sensitive or timorous, but I was in a state of

shock that lasted until Jack was loading me into my plane.

Later on, the hostess told me five people had been caught under the nacelle, and the whole affair seemed to come into focus. But not until we were halfway back to New York. At the time all I remembered, all that seemed important, was Jack saying over and over, bitterness and anger written on his porcelain face: "Too damn many people, Mitch. Too damn much crowding. I'm with you every inch of the way. We need Venus, Mitch, we need the space . . ."

III

KATHY'S apartment, way downtown in Bensonhurst, was not large, but it was comfortable. In a homy, sensible way, it was beautifully furnished, as who should know better than me? I pressed the button over the label "Dr. Nevin," resolutely not remembering that it had once read "Nevin-Courtenay," and smiled at her as she opened the door.

She unsmilingly said two things: "You're late, Mitch," and, "I thought you were going to call first."

I walked in and sat down. "I was late because I almost got killed and I didn't call because I was late. Does that square us?"

She asked the question I wanted her to ask and I told her how close I had come to death that evening.

Kathy is a beautiful woman with a warm, friendly face, her hair always immaculately done in two tones of blonde, her eyes usually smiling. I have spent a great deal of time looking at her, but I never watched more attentively than when I told her about the cargo nacelle near-miss.

It was, on the whole, disappointing. She was really concerned for me, beyond doubt. But Kathy's heart opens to all people and I saw nothing in her face to make me feel that she cared more for me than anyone else.

So I told her my other big news, the Venus account and my stewardship of it. It was more successful; she was startled and excited and happy, and kissed me in a flurry of good feeling. But when I kissed her back, as I'd been wanting to do for months, she drew away and went to sit on the other side of the room, ostensibly to dial a drink.

"You rate a toast," she said. "Champagne at the least. Mitch, it's wonderful news!"

I seized the chance. "Will you help me celebrate? Really celebrate?"

Her brown eyes were wary. "Um," she said. "Sure I will. We'll do the town together—my

treat and no arguments about it. The only thing is, I'll have to leave you punctually at 2400. I'm spending the night in the hospital. I've a hysterectomy to do in the morning and I mustn't get to sleep too late. Or too drunk, either."

But she smiled.

Once again I decided not to push my luck too far. "Great," I said, and I wasn't faking. Kathy is a wonderful girl to do the town with. "Let me use your phone?"

By the time we had our drinks, I had arranged for tickets to a show, a dinner table and a reservation for a nightcap afterward.

Kathy looked a little dubious. "It's a pretty crowded program for five hours, Mitch," she said. "My hysterectomy isn't going to like it if my hand shakes." But I talked her out of it. Kathy is more resilient than that. Once she did a complete trepan the morning after we'd spent the entire night screaming out our tempers at each other, and it had gone perfectly.

THE dinner, for me, was a failure. I don't pretend to be an epicure who can't stand anything but new protein. I definitely am, however, a guy who gets sore when he pays new-protein prices and gets generated protein instead. The texture of the shashlik we both ordered was all right,



but you can't hide the taste. I scratched the restaurant off my list and apologized to Kathy for it. But she laughed it off and the show afterward was fine. Hypnotics often give me a headache, but I slipped right into the trance state this time as soon as the film began and was none the worse for it later.

The night club was packed and the headwaiter had made a mistake in the time for our reservations. We had to wait five minutes in the anteroom, and Kathy shook her head very decisively when I pleaded for an extension on the curfew. But when the

headwaiter showed us with the fanciest apologies and bows to our places at the bar and our drinks came, she leaned over and kissed me again. I felt just fine.

"Thanks," she said. "That was a wonderful evening, Mitch. Get promoted often, please. I like it."

I struck a cigarette for her and one for myself, and somebody behind us began to holler: "You fools! It's not too late!"

We turned and gaped. It was a gaunt, wild-eyed youngster in the entrance of the night club, waving his arms and yelling: "Look at yourselves, you fools! The air is blue with your smoke! You're



burning up and throwing away the product of land that should be growing food!"

A flying squad of waiters headed his way suddenly stopped and disintegrated into very scared individuals. He had a pistol in his hand.

"Don't stop me!" he shouted hoarsely. "I don't want to hurt anybody, but I must bring you

my message. It's not too late! Stop your smoking! Stop your drinking! Don't you know there are starving children in this world? How dare you drink alcohol made from grain? Think of the evil and folly of it! Give up your wickedness! Turn Connie and learn what peace of mind is like! It's not too—"

He hadn't guarded his back. Two or three bluecoats of the Metropolitan Protection Corporation were standing over his lank body.

Kathy yelled: "Gangway! I'm a doctor!" put her head down and charged through the milling

crowd. When I reached her side, she was saying to the M.P.C. foreman: "Killed instantly."

"Thanks, miss," the foreman said modestly. "It was just my duty. Any good protection man could have done as well."

"I didn't—" she began, and then sighed. "Mitch, shall we get back to the bar? We must have time for another drink."

We got our places back and ordered again. "What a hell of a thing to happen," I said, angry that the young lunatic had chosen to mess up our evening.

"I absolutely do not want to talk or think about it," Kathy said. "Make me forget. What were we talking about?"

"Well, I was going to say that we always have fun together."

"And I was going to say that I knew what you were leading up to and that the answer still was no."

"I know you were," I said glumly. "Let's get out of here."

She paid the tab and we left, inserting our anti-soot plugs as we hit the street.

"Cab, sir?" asked the doorman.

"Yes, please," Kathy answered. "A tandem."

He whistled up a two-man pedicab and Kathy gave the lead boy the hospital's address. "You can come if you like, Mitch," she said, and I climbed in beside her. The doorman gave us a starting

push and the cabbies grunted getting up momentum.

For a moment it was like our courtship again: the friendly dark, the slight, musty smell of the canvas top, the squeak of the springs. But for a moment only.

"Watch what you're going to say, Mitch," she warned.

"Please, Kathy, let me go through it anyhow. It won't take long. We were married eight months ago—all right," I said quickly as she started to object. "It wasn't an absolute marriage. But we took the interlocutory vows. Do you remember why we did that?"

She said patiently after a moment: "We were in love."

"I loved you and you loved me. And we both had our work to think about, and we knew that sometimes it made us a little hard to get along with. So we made it interim. It had a year to run before we had to decide whether to make it permanent." I touched her hand and she did not move it away. "Kathy dear, don't you think we knew what we were doing then? Can't we at least give it the year's trial? There are still four months to go. Let's try it. If the year ends and you don't want to file your certificate—well, I won't be able to say you didn't give me a chance. As for me, I don't have to wait. My certificate's on file

now and I won't change."

We passed a street light and I saw her lips twisted into an expression I couldn't quite read.

"Oh, damn it all, Mitch," she said unhappily. "I know you won't change. Must I call you names to convince you that it's hopeless? I used to think you were a sweet guy, an idealist who cared for principles and ethics instead of money. You told me so yourself, very convincingly. You were very plausible about my work, too. You boned up on medicine, you came to watch me operate three times a week, you told all our friends how proud you were to be married to a surgeon. It took me three months to find out what you meant by that. Anybody could marry a girl who'd be a housewife. But it took a Mitchell Courtenay to marry a star class surgeon and make her a housewife."

Her voice was tremulous. "I couldn't take it, Mitch. I never will be able to. Not the arguments, the sulkiness and the ever-and-ever fighting. I'm a doctor. Sometimes a life depends on me. If I'm all torn up inside from battling with my husband, that life isn't safe. Can't you see that?"

I asked quietly: "Kathy, don't you still love me?"

She was absolutely quiet for a long moment. Then she laughed wildly and very briefly. "Here's

the hospital, Mitch. It's midnight."

We climbed out. "Wait," I growled at the lead boy, and walked with her to the door. She wouldn't kiss me good night and she wouldn't make a date to see me again. I stood in the lobby for twenty minutes to make sure she was really staying there that night, and then got into the cab to go to the nearest shuttle station. I was in a vile mood. It wasn't helped any when the lead boy asked innocently after I paid him off: "Say, mister, what does idealist mean? Was the dame an eye doctor?"

"Idealist" is Spanish for 'mind your own business.' I told him evenly. On the shuttle I wondered sourly how rich I'd have to be before I could buy privacy.

The slain Connie rankled, too. They seemed to be capable of anything you can name in the way of damn-foolishness, but this was the first time I'd heard that they were against smoking and drinking. Hell, there was no *real* grain used in whisky. Maybe he wasn't a real Connie, just a crack-brained kid who thought he was. There were such idiots. And there were other people who weren't Connies and who didn't think they were Connies, but who got scragged for being Connies anyway. And there were borderline cases where you could never be

sure. University teachers caught with a well-worn copy of *Our Plundered Planet*. They always said they had only a scholarly interest in it, of course. Just what you'd expect them to say, Connie or not. And naturally the Connies would try to plant people in universities where they could influence the young and make recruits. Better be safe than sorry—or was it?

I thought of old man Hollister. I was pretty sure he was a sound man, but a whispering campaign swept Schocken Associates, complete with all sorts of very circumstantial anecdotes, the kind of thing you *couldn't* make up. He resigned after about three months of it and died shortly afterward. Hollister didn't look as if he were capable of blowing up a DDT factory or garotting a hydraulic mine operator or burning down a penicillin warehouse. But *somebody* did these things. Presumably somebody as innocent-looking as Hollister.

Damn them all! I might have gone home with Kathy if that kid hadn't got himself killed!

MY temper was no better when I arrived at the office next morning. It took all Hester's tact to keep me from biting her head off in the first few minutes, and it was by the grace of God that it was not a Board morning. After

I'd got my mail and the overnight accumulation of inter-office memos, Hester intelligently disappeared for a while. When she came back, she brought me a cup of coffee—authentic plantation-grown coffee.

"The matron in the ladies' room brews it on the sly," she explained. "Usually she won't let us take it out because she's afraid of the Coffiest team. But now that you're star class—"

I thanked her and gave her Jack O'Shea's tape to put through channels. Then I went to work.

First came the matter of the sampling area, and a headache with Matt Runstead. He's Market Research, so I had to work with and through him. But he didn't show any inclination to work with me. I put a map of Southern California in the projector while Matt and two of his helpers boredly sprinkled cigarette ashes on my floor.

With the pointer, I outlined the test areas and controls: "San Diego through Tijuana; half the communities around L. A. and the lower tip of Monterrey. Those will be controls. The rest of Cal-Mexico, from L.A. down, we'll use for tests. You'll have to be on the scene, I guess, Matt; I'd recommend our Diego offices as headquarters. Harris is in charge there and he's a pretty good man."

Runstead grunted. "Not a flake of snow from year's end to year's end. Couldn't sell an overcoat there if you threw in a slave girl as a premium. Why don't you leave market research to somebody who knows something about it? Don't you see how climate nulls your sigma?"

The younger of his stamped-out-of-tin assistants started to back the boss up, but I cut him off. Runstead had to be consulted on test areas—it was his job—but Venus was my project and I was going to run it.

I said, sounding just a little nasty: "Regional and world income, age, density of population, health, psyche-friction, age-group distribution and mortality causes and rates are seven-place sigmas, Matt. Cal-Mex was designed personally by God Himself as a perfect testing area. In a tiny universe of less than a hundred million, it duplicates every important segment of North America. I will not change my project and we are going to stick to the area I indicated."

"It won't work. The temperature is the major factor. Anybody should be able to see that."

"I'm not just anybody, Matt. I'm the guy in charge."

Matt Runstead stubbed out his cigarette and got up. "Let's go talk to Fowler," he said and walked out. There wasn't any-

thing for me to do except follow him.

As I left, I heard the older of his helpers picking up the phone to notify Fowler Schocken's secretary that we were coming. He had a team all right. I spent a little time wondering how I could build one like that myself before I got down to the business of planning how to put it to Fowler.

But Fowler Schocken has a surefire technique of handling interstaff hassels. He worked it on us. When we came in, he said exuberantly: "The two men I want to see! Matt, can you put out a fire for me? It's the A.I.G. people. They claim our handling of the PregNot account is hurting their trade. They're talking about going over to Taunton unless we drop PregNot. Their billing isn't much, but a birdie told me that Taunton put the idea into their heads."

He went on to explain the intricacies of our relationship with the American Institute of Gynecologists. I listened only half-heartedly; our "Babies without Maybes" campaign on their sex-determination project had given them at least a twenty per cent plus on the normal birthrate. They should be solidly ours after that.

Runstead said: "They don't have a case, Fowler. We sell liquor and hangover remedies

both. They've got no business yelling about any other account. Besides, what does this have to do with Market Research?"

Fowler chuckled happily. "They'll expect the account executives to give them the usual line—but instead we'll let you handle them yourself. Snow them under with a whole line of charts and statistics to prove that Preg-Not never prevents a couple from having a baby; it just permits them to postpone it until they can afford to do the job right. In other words, their unit of sale goes up and their volume stays the same. And it'll be one in the eye for Taunton. Lawyers get disbarred for representing conflicting interests; we've got to make sure that any attempt to foist the same principle on our profession is nipped in the bud. Think you can handle it for the old man, Matt?"

"Sure," Runstead grumbled. "What about Venus?"

Fowler twinkled at me. "What about it, Mitch? Can you spare Matt for a while?"

"Forever," I said. "In fact, that's what I came to see you about. Matt's scared of Southern California."

Runstead belligerently dropped his cigarette and let it lie, crimping the nylon pile of Fowler's rug. "What am I supposed to be scared of?"

"Easy," said Fowler. "Matt isn't scared. Let's hear him out."

Runstead glowered at me. "All I said was that Southern California isn't the right test area. What's the big difference between Venus and here? Heat! We need a test area with continental-average climate. A New Englander might be attracted by the heat on Venus; a Tijuana man, never. It's too damn hot in Cal-Mex already."

"Um," said Fowler Schocken. "Tell you what, Matt. This needs going into, and you'll want to get busy on the A.I.G. thing. Pick out a good man to vice you on the Venus section while you're out and we'll have it hashed over at the section meeting tomorrow afternoon. Meanwhile—" He glanced at his desk clock—"Senator Danton has been waiting for seven minutes. All right?"

It was clearly not all right with Matt, and I felt cheered for the rest of the day.

THINGS went well enough. Development came in with a report on what they'd gleaned from O'Shea's tape and all the other available material. The prospects for manufacture were there. Quick, temporary ones like little souvenir globes of Venus manufactured from the organics floating around in what we laughingly called the "air" of Venus.

Long-term ones—an assay had indicated pure iron: not nine-nines pure and not ninety-nine nines pure, but absolute iron that nobody would ever find or make on an oxygen planet like Earth. The labs would pay well for it. And Development had not developed, but found a remarkable little thing called a high-speed Hilsch Tube. Using no power, it could refrigerate the pioneers' homes by using the hot tremendous winds of Venus themselves. It was a simple thing that had been lying around since 1943. Nobody had had any use for it, because nobody had had that kind of wind to play with before.

Tracy Collier, the Development liaison man with Venus Section, tried also to tell me about nitrogen-fixing catalysts. I nodded from time to time and gathered that sponge-platinum "sown" on Venus would, in conjunction with the continuous, terrific lightning, cause it to "snow" nitrates and "rain" hydrocarbons, purging the atmosphere of formaldehyde and ammonia.

"Expensive?" I asked cautiously.

"As expensive as you want it to be," he said. "The platinum doesn't get used up, you know. Use one grain and take a million years or more. Use more platinum and take less time."

I didn't really understand, but

obviously it was good news. I patted him and sent him on his way.

Industrial Anthropology gave me a setback. Ben Winston complained: "You can't make people want to live in a steam-heated sardine can. All our folkways are against it. Who's going to travel sixty million miles for a chance to spend the rest of his life cooped up in a tin shack—when he can stay right here on Earth and have corridors, elevators, streets, roofs, all the wide-open space a man could want? It's against human nature, Mitch!"

He went on telling me about the American way of life—walked to the window with me and pointed out at the hundreds of acres of rooftops where men and women could walk around in the open air, wearing simple soot-extractor plugs in their nostrils instead of a bulky oxygen helmet.

Finally I got mad. I said: "Somebody must want to go to Venus. Otherwise why would they buy Jack O'Shea's book the way they do? Why would the voters stand still for a billion-and-up appropriation to build the rocket? God knows I shouldn't have to lead you by the nose this way, but here's what you are going to do: Survey the book-buyers, the repeat-viewers of O'Shea's TV shows, the ones who come early to his lectures and stand around

talking in the lobby after. Find out about the Moon colony—what types they have there. And then we'll know who to aim our ads at. Any arguments?"

There weren't.

Hester had done wonders of scheduling that first day and I made progress with every section head involved. She couldn't read my paper work for me, though, and by quitting time I had six inches of it stacked by my right arm. Hester volunteered to stay with me, but there wasn't really anything for her to do. I let her bring me sandwiches and another cup of coffee, and chased her home.

IT was after eleven by the time I was done. I stopped off in an all-night diner on the fifteenth floor before heading home. It was a windowless box of a place where the coffee smelled of the yeast it was made from and the ham in my sandwich bore the taint of soy. But it was only a minor annoyance and out of my mind when I got home. For as I opened the door to my apartment, there was a smack and an explosion, and something slammed into the door frame by my head. I ducked and yelled. Outside the window, a figure dangling from a rope ladder drifted away, a gun in its hand.

I was stupid enough to run

over to the window and gawk out at the helicopter-borne figure. I would have been a perfect target if it had been steady enough to shoot at me again, but it luckily wasn't.

Surprised at my calm, I called the Metropolitan Protection Corporation.

"Are you a subscriber, sir?" their operator asked.

"Yes, dammit. For six years. Get a squad over here!"

"One mo-moment, Mr. Courtenay. . . . Mr. Mitchell Courtenay? Copyameth, star class?"

"Will you kindly get a man over here before the character who just took a shot at me comes back?"

"I have your record before me, sir, I am sorry, but your account is canceled. We do not accept star class accounts at the general rate because of the risk of industrial feuds, sir." She named a figure that made each separate hair on my head stand on end. "There is," she said helpfully, "a rebate due you on the unexpired portion of your previous policy."

"Thanks," I said heavily, and rang off. I put the *Program-Printing to Quarry Machinery* reel of the Telephone Red Book into the reader and spun it to *Protective Agencies*. I got turn-downs from three or four and finally one sleepy-sounding private detective agreed to come on

over for a stiff fee.

He showed up in half an hour and I paid him, and all he did was annoy me with unanswerable questions and look for non-existent fingerprints. After a while he went away, saying he'd work on it.

I got to bed and eventually to sleep with one of the unanswered questions chasing itself around and around in my head:

Who would want to shoot a simple, harmless advertising man like me?

IV

I TOOK my courage in my hands and walked briskly down the hall to Fowler Schocken's office. He might throw me out of the office for asking, but I needed an answer and he might have it.

Ahead of me, his door opened explosively and Tildy Mathie lurched out. She stared at me, but I'll take commercial oath she didn't know my name.

"Rewrites," she said wildly. "I slave my heart out for that white-haired old rat, and what does he give me? Rewrites. 'This is good copy, but I want better than good copy from you,' he says. 'Rewrite it,' he says. 'I want drive, and beauty, and humble, human warmth, and ecstasy and all the tender, sad emotion of your sweet

womanly heart,' he says. 'and I want it in fifteen words.' I'll give him fifteen words!" she sobbed, and pushed past me down the hall. "But they won't be sweet or womanly!"

I cleared my throat, knocked once and walked into Fowler's office. There was no hint of his brush with Tildy in the smile he gave me. In fact, his pink, clear-eyed face belied my suspicions, but—I had been shot at.

"I'll only be a minute, Fowler," I said. "I want to know whether you've been playing rough with Taunton Associates."

"I always play rough," he twinkled. "Rough, but clean."

"I mean very, very rough and very, very dirty. Have you, by any chance, tried to have any of their people shot?"

"Mitch! Really!"

"I'm asking." I went on doggedly. "because last night a 'copter-borne marksman tried to plug me when I came home. I can't think of any angle except retaliation from Taunton."

"Scratch Taunton," he said positively.

I took a deep breath. "Fowler," I said, "man-to-man, you haven't been Notified? I may be out of line, but I've got to ask. It isn't just me. It's the Venus Project."

There were no apples in Fowler's cheeks at that moment, and I could see in his eyes that my

job and my star-class rating hung in the balance.

He said: "Mitch, I made you star class because I thought you could handle the responsibilities that came with it. It isn't just the work. I know you can do that. I thought you could live up to the commercial code as well."

I hung on. "Yes, sir," I said.

He sat down and lit a Starr. After just exactly the right split-second of hesitation, he pushed the pack to me. "Mitch," he said. "You're a youngster, Mitch, only star class a short time. But you've got power. Five words from you, and in a matter of weeks or months, half a million consumers will find their lives completely changed. That's power, Mitch, absolute power. And you know the old saying. Power ennobles. Absolute power ennobles absolutely."

"Yes, sir," I said. I knew all the old sayings. I also knew that he was going to answer my question eventually.

"Ah, Mitch," he said dreamily, waving his cigarette, "we have our prerogatives and our duties and our particular hazards. You can't have one without the others. If we didn't have feuds, the whole system of checks and balances would be thrown out of gear."

"Fowler," I said, greatly daring, "you know I have no complaints about the system. It

works; that's all you have to say for it. I know we need feuds. And it stands to reason that if Taunton files a feud against us, you've got to live up to the code. You can't broadcast the information; every executive in the shop would be diving for cover instead of getting work done. But — Venus Project is in my head, Fowler. I can handle it better that way. If I write everything down, it slows things up."

"Of course," he said.

"Suppose you were Notified and suppose I'm the first one Taunton knocks off—what happens to Venus Project?"

"You may have a point," he admitted. "I'll level with you, Mitch. There has been no Notification."

"Thanks, Fowler," I said sincerely. "I did get shot at. And that accident in Washington—maybe it wasn't an accident. You don't imagine Taunton would try anything without Notifying you, do you?"

"I haven't provoked them to that extent, and they'd never do a thing like that anyhow. They're cheap, they're crooked, but they know the rules of the game. Killing in an industrial feud is a misdemeanor. Killing *without* Notification is a *commercial offense*. And that means—"

I nodded. "Cerebrin."

Fowler beamed. "What I like

about you, Mitch, is you can face facts. No pussy-footing; call a spade a spade. Well," he said cheerfully, "I'm sorry I can't help you out. You haven't been getting into any of the wrong beds, shall I say?"

"No," I said. "My life's been very dull. The whole thing's crazy. It must have been a mistake. But I'm glad that whoever-it-was couldn't shoot."

"So am I, Mitch, so am I! You saw O'Shea?" He had already dismissed the shooting from his mind.

"I did. He's coming up here today. He'll be working closely with me."

"Splendid! Some of that glory will rub off on Fowler Schocken Associates if we play our cards right. Dig into it, Mitch. I don't have to tell you how."

It was a dismissal.

O'SHEA was waiting in the anteroom of my office. It wasn't an ordeal; most of the female personnel was clustered around him as he sat perched on a desk, talking gruffly and authoritatively. There was no mistaking the looks in their eyes. He was a thirty-five-inch midget, but he had money and fame, the two things we drill and drill into the population. O'Shea could have taken his pick of them. I wondered how many he had

picked since his return to Earth in a blaze of glory.

We run a taut office, but the girls didn't scatter until I cleared my throat.

"Morning, Mitch," O'Shea said. "You over your shock?"

"Sure. And I ran right into another one. Somebody tried to shoot me." I told the story and he grunted thoughtfully.

"Have you considered getting a bodyguard?" he asked.

"Of course. But I won't. It must have been a mistake."

"Like that cargo nacelle?"

I paused. "What's on your mind? I can't be down in anybody's little black book. Jack. The stakes are too high. Fowler's ruled out retaliation, and unprovoked murder for business advantage—" I lowered my voice—"means cerebrin for five seconds and gas."

He made a soundless whistle and we went into my office. When the door closed, he said: "I never heard that. About you-know."

"Well, keep it quiet. You can tell anybody with good sense, somebody upstairs commercially, because they probably know it already. But the consumers wouldn't understand. It's been that way for years. The corporations got fed up with undercover business assassinations and put an amendment through Congress authorizing the use of several

pharmaceutical preparations in connection with capital punishment. Cerebrin's in the list, buried under an obscure name. Everybody who ought to know about it knows. Result, no more killings."

He nodded. "Five seconds is what?"

"One quarter of the first phase. Roughly equivalent to being sandpapered all over your body, blinded with a million-power searchlight, deafened by a two hundred-decibel siren, and strangled by hydrogen sulfide continuously for fifteen years. Care to try some?"

"Thanks very much, but no, thanks."

"That's the way everybody feels. I fed your tape to—"

His mind was still on the drug. "I've heard about the second phase," he said tentatively.

"Classified information."

O'Shea grinned. "You can't pull that on me, Mitch. What you should have said was: 'Frankly, Jack, I don't know a thing about it.' Now give!"

"You've got me, but all this strikes me as unnecessarily morbid. Well, people have come back from very light dosages of the first phase—most of them broken, some of them only very badly bent. Nobody's come back from the whole twenty seconds. Jack, can we please get off this sub-

ject? It gives me the horrors."

"Permission granted," he beamed. "Now, let's go to work—but on what?"

"First, words. We want words that are about Venus, words that'll tickle people. Make them sit up. Make them muse about change, and space, and distant planets. Words to make them a little discontented with what they are and a little hopeful about what they might be. Words to make them feel noble about feeling the way they do, and not foolish. Words that will do all these things and also make them happy about the existence of Indastries and Starrzelius Verily and Fowler Schocken Associates. Words that will do all these things and also make them feel unhappy about the existence of Universal Products and Taunton Associates."

He was staring at me with his mouth open. "You serious?" he finally exclaimed.

"You're on the inside now. That's the way we work. That's the way we worked on you."

"What are you talking about?" he demanded.

"You're wearing Starrzelius Verily clothes and shoes, Jack. It means we got you. Taunton and Universal worked on you, Starrzelius and Schocken worked on you, and you chose Starrzelius. Schocken reached you.

Smoothly, without ever being aware that it was happening, you became persuaded that there was something rather nice about Starrzelius clothes and shoes, and that there was something rather not-nice about Universal clothes and shoes."

"I never read the ads," he said defiantly.

"Our ultimate triumph is wrapped up in that statement."

"I solemnly promise," O'Shea said, "that as soon as I get back to my hotel room, I'll send my clothes down the incinerator chute—"

"Luggage, too?" I asked. "Starrzelius luggage?"

He looked startled for a moment and then regained his calm. "Starrzelius luggage, too," he said. "And then I'll pick up the phone and order a complete set of Universal luggage and apparel. And you can't stop me."

"I wouldn't think of stopping you. It means more business for Starrzelius. Tell you what you're going to do: You'll get your complete set of Universal luggage and apparel. You'll wear it for a while with a vague, submerged discontent. It's going to work on your libido, because our ads for Starrzelius have convinced you that it isn't quite virile to buy from any other firm. Your self-esteem will suffer; deep down, you'll know that you're not wear-

ing the best. Your subconscious won't stand up under much of that. You'll find yourself 'losing' bits of Universal apparel. You'll find yourself 'accidentally' putting your foot through the cuff of your Universal pants. You'll find yourself overpacking the Universal luggage and damning it for not being roomier. You'll walk into stores and in a fit of momentary amnesia about this conversation you'll buy Starrzelius, bless you."

O'Shea laughed uncertainly. "And you did it with words?"

"Words and pictures. Sight and sound and smell and taste and touch. And the greatest of these is words. Do you read poetry?"

"My God, of course not! Who can?"

"I don't mean the contemporary stuff; you're quite right about that. I mean Keats, Swinburne—the great lyricists."

"I used to, a little," he cautiously admitted. "What about it?"

"I'm going to ask you to spend the morning and afternoon with one of the world's great poets; a girl named Tildy Mathis. She doesn't know she's a poet; she thinks she's a boss copywriter. Don't enlighten her. It might make her unhappy."

"Thou still unrevish'd bride of quietness,

Thou foster-child of silence and

slow time,

Sylvan historian—

That's the sort of thing she would have written before the rise of advertising. The correlation is perfectly clear. Advertising up, lyric poetry down. There are only so many people capable of putting together words that stir and move and sing. When it became possible to earn a very good living in advertising by exercising this capability, lyric poetry was left to untalented screwballs who had to shriek for attention and compete by eccentricity."

"You talk pretty damn funny yourself."

"Words are my business, Jack."

"Why are you telling me all this?" he wanted to know.

"I said you're on the inside. There's a responsibility that goes with the power. In this profession, we reach into the souls of men and women. We do it by taking talent and — redirecting it. Nobody should play with lives the way we do unless he's motivated by the highest ideals."

"I get you," he said softly. "Don't worry about my motives. I'm not in this thing for money or fame. I'm in it so the human race can have some elbow room and dignity again."

"That's it," I said, putting on Expression Number One. But inwardly I was startled. The "high-

est ideal" I had been about to mention was Sales.

I hurried for Tildy. "Talk to her," I said. "Answer her questions. Ask her some. Make it a long, friendly chat. Make her share your experiences. And, without knowing it, she'll write lyric fragments of your experiences that will go right to the hearts and souls of the readers. Don't hold out on her."

"Certainly not. Uh, Mitch, will she hold out on me?" His face was from a Tanagra figurine of a hopeful young satyr.

"That depends on you. I told you people are stirred by words. Women are people, Jack."

But I wondered about Kathy. She hadn't stayed stirred.

THAT afternoon, for the first time in four months, Kathy called me.

"Is anything wrong?" I asked worriedly. "Anything I can do?"

She laughed. "Nothing wrong, Mitch. I just wanted to say hello and tell you thanks for a lovely evening."

"How about another one?" I promptly asked.

"Dinner at my place tonight suit you?"

"It certainly does. What color dress will you be wearing? I'm going to buy you a flower!"

"Oh, Mitch, you needn't be that extravagant; we aren't court-

ing. But there is something I wish you'd bring."

"Name it and it's yours."

"Jack O'Shea. Can you manage it? I saw by the 'cast that he came into town this morning and I suppose he's working with you."

Very dampened, I said: "Yes, he is. I'll check with him and call you back. Are you over at the hospital?"

"Yes. And thanks so much for trying. I'd love to meet him."

I got in touch with O'Shea in Tildy's office. "You booked up for tonight?" I asked.

"I don't seem to be," he said morosely. "My proposition didn't sell so good. What's yours?"

"Quiet dinner at home with my wife and me. She happens to be beautiful and a good cook and a star class surgeon and excellent company."

"You're on."

So I called Kathy back and told her I'd bring the social lion about seven.

He stalked into my office at six, grumbling: "I'd better get a good meal out of this, Mitch. Your Miss Mathis appeals to me. What a dope! Does she have sense enough to come in out of the smog?"

"I don't believe so," I said. "But Keats was properly hooked by a designing wench. Byron didn't have sense enough to stay

out of the V-D ward, and Swinburne made a tragic mess out of his life. Do I have to go on?"

"No. What kind of marriage have you got?"

"Interlocutory," I said, a little painfully.

He raised his eyebrows a trifle. "My mother was an Easter-duty Catholic," he said, "and I guess I'm a lapsed Catholic or worse. But still there's something about those arrangements that sets my teeth on edge."

"Mine, too," I said, "at least where it involves me. In case Tildy missed telling you, my beautiful and talented wife does not want to finalize it, we don't live together, and unless I change her mind in four months, we'll be washed up."

"Tildy did miss telling me," he said. "You're pretty sick about it, seems to me."

I almost invited his sympathy. I almost started to tell him how rough it was, how much I loved her, how she wasn't giving me an even break, how I'd tried everything I could think of and nothing would convince her. And then I realized that I'd be telling it to a sixty-pound midget who, if he married, might become his wife's helpless plaything or butt of ridicule.

"Middling sick," I said. "Let's go, Jack. Time for a drink and then the shuttle."



KATHY had never looked lovelier and I wished I hadn't let her talk me out of shooting a couple of days' pay on a flower from Tiffany's.

She said hello to O'Shea and he announced loudly and immediately: "I like you. There's no gleam in your eye. No 'Isn't he cute?' gleam. No 'A girl's got a right to try anything once' gleam. No 'My, he must be rich and frustrated!' gleam. In short, you like me and I like you."

As you may have gathered, he was a little drunk.

"You are going to have some coffee, Mr. O'Shea," she said. "I

ruined myself to provide real pork sausages and real apple sauce, and you're going to taste them."

"Coffee?" he said. "Coffee for me, ma'am. To drink coffee would be disloyal to the great firm of Fowler Schocken Associates, with which I am associated. Isn't that right, Mitch?"

"I give indulgence this once," I said. "Besides, Kathy doesn't believe the harmless alkaloid in Coffee is harmless."

Luckily, she was in the kitchen corner with her back turned when I said that, and either missed it or could afford to pretend she did. We'd had a terrific four-hour battle over that very point, complete with epithets like "baby-poisoner" and "crackpot-reformer" and a few others that were shorter and nastier.

The coffee was served and quenched O'Shea's mild glow.

Dinner was marvelous. The pork sausages turned out to be not patties, but crisp little cylinders; I'd never had them that way before and asked about them.

"That's how they usually were made," Kathy explained. "The casing around the meat is organic, too. It's the small intestine of the hog."

"Gah!" I said, astonished and disgusted.

"Now, Mitch," she said evenly.

"It tasted good. This nice-nice business about food isn't smart. Carry it to extremes and it becomes very foolish indeed. I hear that in India it's no use to ship rice into a Northern famine area or wheat into a Southern famine area. The people just won't eat it. They'll lie down on a sack of it and starve."

"Interesting." O'Shea commented. "And it *did* taste good. If I may ask—where did you get it?"

She smiled. "I'm afraid I couldn't give you the—supplier's name without his permission. I'm sure you understand."

"Of course. Lord, I wish I'd lived in the old days! Don't you, Mitch?"

"Not me," I said promptly. "You can moon about the spacious four-room apartments, and about buying all the new meat you want at fifty dollars a pound. Things are a little more cramped now, but think of what we have in added convenience. In my trainee days we did some research for Starrzelius depilatory and I was the goat, I had to shave, with a razor, for one whole week! Unless you've been through that yourself, you don't know what it's like. No, we're better off nowadays."

Kathy mused: "Wouldn't the simplest way out be to grow a beard?"

I stared at her, decided she was joking, and laughed. "Surely, Kathy, you'll admit that medical progress means we're healthier now than we used to be?"

She struck a cigarette and exhaled a long plume of smoke before she answered.

"Who knows? The Black Plague came to an end in the Middle Ages without the discovery of penicillin. Medical historians are still arguing about the great influenza epidemic of 1917-1919. Some of them say it was a coal shortage — no, not even that, just a breakdown of coal distribution. Surgery? Well, I did the hysterectomy this morning and got all the metastases — maybe. We still don't know about mental illness. But we do have an immense variety of things to shoot into people when they complain that it hurts here. Mr. O'Shea, if you go around saying that Dr. Nevin was saying thus-and-so about medical progress, I'll first deny it and second cut your throat."

"Respectfully noted," O'Shea said. "To keep this seminar going, I state that I am an aeronautical engineer and a good one. I've been exposed to the history of aviation. You know how nerve-racking a flight is—traffic pattern up, congested lanes, traffic pattern down. I can't point to any golden age when things were bet-

ter, but I've sometimes thought the whole approach was wrong since Kittyhawk. The theme song has always been *bigger and faster; bigger and faster*. Why not *smaller and smoother*? Why not *slower and pleasanter*?"

I found myself hotly defending things as they are: bigger because you can do more with them, faster because it means increased command of nature — in effect, lengthening your active life.

"You can lengthen your active life in a manner of speaking with cerebrin," O'Shea objected. "What's so good about that?"

"That's not what I mean—."

"You've been to the Moon, I suppose?" Kathy asked O'Shea.

"Not yet. One of these days."

"There's nothing there," I said. "It's a waste of time. One of our dullest, deadest accounts. I suppose we only kept it for the experience we'd get, looking ahead to Venus. A few hundred people mining—that's the whole story."

"Excuse me," O'Shea said, and retired.

I grabbed the chance. "Kathy, darling," I said, "it was real fine of you to ask me over. Does it mean anything?"

She rubbed her right thumb and index finger together and I knew that whatever she would say after that would be a lie. "It might, Mitch. You'll have to give me time."

I threw away my secret weapon. "You're lying," I answered disgustedly. "You always do this before you lie to me." I showed her, and she let out a short laugh.

"Fair's fair," she said with bitter amusement. "You always catch your breath and look right into my eyes when you lie to me."

O'Shea returned and felt the tension at once. "I ought to be going," he said.

There were the usual politenesses at the door, and Kathy kissed me good night. It was a long, warm, clinging kiss; altogether the kind of kiss that should start the evening rather than end it. It set her own pulse going—I felt that—but she closed the door on us.

"You been thinking about a bodyguard again?" O'Shea asked.

I thought it was an inexcusable crack and started to say something unpleasant. His face was abstracted; he had missed the by-play or ignored it.

"The shooting was a mistake," I stubbornly said.

"Let's stop by your place for a drink," he suggested ingenuously.

The situation was almost pathetic. Sixty-pound Jack O'Shea was guarding me! "Sure," I said. We got on the shuttle.

He went into the room first

and turned on the light, and nothing happened. While sipping a very weak whisky and soda, he drifted around the place checking window locks, hinges and the like.

"This chair would look better over there," he said. Over there, of course, was out of the line of fire from the window. I moved it.

"Take care of yourself, Mitch," he said when he left. "That lovely wife and your friends would miss you if anything happened."

The only thing that happened was that I barked my shin setting up the bed, and that was happening all the time. Even Kathy, with a surgeon's neat, economical movements, bore the scars of life in a city apartment. You set up the bed at night, you took it down in the morning, you set up the table for breakfast, you took it down to get to the door. No wonder some short-sighted people sighed for the spacious old days, I thought, settling myself luxuriously for the night.

V

THINGS were rolling within a week. With Runstead out of my hair and at work on the PregNot-A.I.G. hassel, I could really grip the reins.

Tildy's girls and boys were putting out the copy—temperamental kids, sometimes doing a line

a day with anguish; sometimes rolling out page after page effortlessly, with shining eyes, as though possessed. She directed and edited their stuff and passed the best of the best to me: nine-minute commercial scripts, pix cut-lines, articles for planting, news stories, page ads, whispering campaign cue-lines, endorsements, jokes, limericks and puns (clean and dirty) to float through the country.

Visual was hot. The airbrush and camera people were having fun sculpturing a planet. It was the ultimate in "Before and After" advertising, and they were caught by the sense of history.

Development kept pulling rabbits out of hats. Collier once explained to me when I hinted that he might be over-optimistic: "It's energy, Mr. Courtenay. The Sun pours all that energy into Venus in the form of heat and molecular bonds and fast particles. Here on Earth we don't have that level of available energy. We use wind-mills to tap the kinetic energy of the atmosphere. On Venus we'll just build an accumulator, put up a lightning rod and jump back. It's an entirely different level."

Market Research Industrial Anthropology was at work in San Diego sampling the Cal-Mex area, trying Tildy's copy, Visual's layouts and films and extrapolating and interpolating. I had

a direct wire to the desk of Ham Harris, Runstead's vice, in San Diego.

A typical day began with a Venus Section meeting: pep talks by me, reports of progress by all hands, critique and cross-department suggestions. Harris, on the wire, might advise Tildy that "serene atmosphere" wasn't going well as a cue phrase in his sampling and that she should submit a list of alternatives. Tildy might ask Collier whether it would be okay to say "topaz sands" in a planted article which would hint that Venus was crawling with uncut precious and semi-precious stones. Collier might tell Visual that they'd have to make the atmosphere redder in a "before" panorama. And I might tell Collier to lay off because it was permissible license.

After adjournment, everybody would go into production and I'd spend my day breaking ties, coordinating, and interpreting my directives from above down to the operational level. Before close of day, we'd hold another meeting which I would keep to some specific topic, such as integration of Starrzelius products into the Venus economy, or income-level of prospective Venus colonists for optimum purchasing power twenty years after landing.

And then came the best part of the day. Kathy and I were going

steady again. We were still under separate cover, but I was buoyantly certain that it wouldn't be long now. Sometimes she dated me, sometimes I dated her. There wasn't much serious talk. She didn't encourage it and I didn't press it. I thought that time was on my side. Jack O'Shea made the rounds with us once before he had to leave for a lecture in Miami, and that made me feel good, too. A couple of well-dressed, good-looking people who were so high up they could entertain the world's number one celebrity.

After a week of solid, satisfying progress on the job, I told Kathy it was time for me to visit the outlying installations—the rocket site in Nevada and sampling headquarters in San Diego.

"Fine," she said. "Can I go with you?"

I was silly-happy about it; it wouldn't be long now.

THE rocket visit was routine. I had a couple of people there as liaison with Armed Forces, Republic Aviation, Bell Telephone Labs and U. S. Steel. They showed Kathy and me through the monster ship, glib as tourist guides: "... vast steel shell ... more cubage than the average New York office building ... closed-cycle food and water and air regeneration ... one-third

drive, one-third freight, one-third living space ... heroic pioneers ... insulation ... housekeeping power ... sunside-darkside heat pumps ... unprecedented industrial effort ... national sacrifice ... national security ..."

Oddly, the most impressive thing about it to me was not the rocket itself, but the wide area around it. For a full mile the land was cleared: no buildings, no greenhouse decks, no food tanks, no Sun traps. Partly security, partly radiation. The gleaming sand cut by irrigation pipes looked strange. There probably wasn't another sight like it in North America. It troubled my eyes. Not for years had I focused them more than a few yards in any direction except up.

"How strange," Kathy said at my side. "Could we walk out there?"

"Sorry, Dr. Nevin," said one of the liaison men. "It's our perimeter. The tower guards are ordered to shoot anybody out there."

"Have contrary orders issued," I told him. "Dr. Nevin and I want to walk."

"Of course, Mr. Courtenay," the man said, very worried. "I'll do my best, but it'll take a little time. I'll have to clear it with C.I.C., Naval Intelligence, C.I.A., F.B.I., A.E.C., Security and Intelligence—"

I looked at Kathy and she shrugged with helpless amusement.

"Never mind," I said.

"Thank God!" breathed my liaison man. "It's never been done before, so there aren't any channels to do it through. You know what *that* means."

"I do indeed. Tell me, has all the security paid off?"

"There's been no sabotage or espionage, foreign or Connie, that we know of." He rapped a knuckle of his right hand solemnly on a genuine oak engagement ring he wore on the third finger of his left hand. I made a mental note to have his expense account checked up on. A man on his salary had no business wearing such expensive jewelry.

"The Connies interested?" I asked.

He shrugged. "Who knows?" Would you like to meet Commander MacDonald and find out? He's the O.N.I. chief here. A specialist in Connies."

"Like to meet a Connie specialist, Kathy?" I asked.

"If we have time," she said.

"I'll have them hold the jet for you if necessary," the liaison man offered eagerly, trying hard to undo his fiasco on the tower guards. He led us through the tangle of construction shacks and warehouses to the Administration Building and past seven security

check points to the office of the commander.

He was one of those career officers who make you feel good about being an American consumer—quiet, competent, strong. He wore the class insignia of the Pinkerton Graduate School of Detection and Military Intelligence, Inc. It's vaneer pine with an open eye carved on it; no flashy inlay work. But it's like a brand name. It tells you that you're dealing with quality.

"You want to hear about Connies?" he asked quietly. "I'm your man. I've devoted my life to running them down."

"A personal grudge, Commander?" I asked, thinking we'd hear something melodramatic.

"No. Old-fashioned pride of workmanship if anything. I like the thrill of the chase, too, but there isn't much chasing. You get Connies by laying traps. Did you hear about the Wichita bombing? Of-course-I-shouldn't-knock-the-competition-but — Wilson Detection bungled that one badly. They should have known it was a setup for a Connie demonstration."

"Why, exactly, Commander?" Kathy asked.

He smiled wisely. "Feel. The Connies don't like hydraulic mining—ever. Give them a chance to pull some wrecking and they'll take it if they can."

"But why don't they like hydraulic mining?" she persisted. "We've got to have coal and iron, don't we?"

"Now," he said with pretended, humorous weariness, "you're asking me to probe the mind of a Connie. I've had them questioned for up to six hours at a stretch and never yet have they talked sense. If I caught the Wichita Connie, he'd talk willingly—but it would be gibberish. He'd tell me the hydraulic miner was destroying top-soil. I'd say yes, what about it? He'd say the top-soil can never be replaced. I'd say yes, it can, if it had to be and anyway tank farming's better. He'd say something like tank farming doesn't provide animal cover and so on. It always winds up with him telling me the world's going to hell and people have got to be made to realize it."

Kathy laughed incredulously.

"They're fools, but they're tough," the commander went on. "They have discipline. A cell system. If you get one Connie, you usually get the two or three others in his cell, but you hardly ever get any more. There's no lateral contact between cells, and vertical contact with higher-ups is by rendezvous with middle-men. And of course the picture is clouded by what you might call 'small-c' connies: neurotic youngsters, mental cases, occasionally

professional criminals who fake a Connie demonstration so they can loot."

"I think we saw one of those neurotic youngsters," Kathy said. She described the incident in the bar that had loused up our evening the week before.

The commander nodded positively. "Small-c. They don't carry arms unless they're going to use them, and the smoking-and-drinking angle is just theoretical to them. They say they know it's 'anti-survival'—in their jargon—but they say the conditions that cause smoking and drinking must be corrected first. Yes, I think I know them and that's why I'm not especially worried about sabotage or a demonstration here. It doesn't have the right ring to it."

"You're very reassuring, Commander," Kathy smiled as we got up. "Thank you so much."

At the door, MacDonald cautioned us: "We don't talk to just anybody about the small-c connies, as I called them. The public thinks every demonstration is by the true Connie organization which is good for our purposes. The worse they think of Connies and the more afraid of them they are, the closer they cooperate with Intelligence and Security. Understood?"

"My lips are sealed, Commander. Thanks again."

KATHY and I lolled back, watching the commercials parade around the passenger compartment of the jet at eye level. There was the good old Kiddiebutt jingle I worked out when I was a cadet. I nudged Kathy and told her about it as it blinked and chimed at us.

All the commercials went blank and a utility announcement came on: "In compliance with Federal law, passengers are advised that they are now passing over the San Andreas Fault into earthquake territory, and that earthquake loss and damage clauses in any insurance they may carry are now canceled and will remain canceled until passengers leave earthquake territory." Then the commercials resumed their parade.

"And," said Kathy, "I suppose it says in the small print that yak-bite insurance is good anywhere except in Tibet."

"Yak-bite insurance?" I asked, astonished. "What would anyone carry that for?"

"A girl can never tell when she'll meet an unfriendly yak, can she?"

"I conclude that you're kidding," I said with dignity. "We ought to land in a few minutes. Personally, I'd like to pop in on Ham Harris unexpectedly. He's a good kid, but Runstrad may have infected him with defeatism.

There's nothing worse in our line."

"I'll come along with you if I may, Mitch."

We gawked through the windows like tourists as the jet slid into the traffic pattern for its call-down from the tower. Kathy had never been there before. But there's always something new to see because buildings keep falling down and new ones put up. And what buildings! They're more like plastic tents on plastic frames than anything else. That kind of construction means they give and sway instead of snapping and crumbling when a quake jiggles southern California. And if the quake is bad enough and the skeleton does snap, what have you lost? Just some plastic sheeting that broke along the standard snap grooves and some plastic structural members that generally are salvageable.

From a continental economic viewpoint, it's also a fine idea not to tie up too much fancy construction in southern California. Since the A-bomb tests did things to the San Andreas fault, there's been a pretty fair chance that the whole area would slide quietly into the Pacific some day—any day. But when we looked down out of the traffic pattern, it still was there and we knew, like everybody else, that it would probably stay for the duration of

our visit. There had been some panic before my time when the quakes became daily, but I'd blame that on the old-style construction that fell hard and in jagged hunks. Eventually people got used to it and—as you'd expect in southern California—even proud of it. Natives could cite you reams of statistics to prove that you stood more chance of being struck by lightning or a meteorite than you did of getting killed in one of their quakes.

We got a speedy three-man limousine to pedal us to the local branch of Fowler Schocken Associates.

The receptionist gave me my first setback. She didn't recognize my face and she didn't recognize my name when I gave it to her. She said lazily: "I'll see if Mr. Harris is busy, Mr. Courtenay."

"Mr. Courtenay, young lady. And I'm Mr. Harris's boss."

Kathy and I walked in on a scene of idleness and slackness that curled my hair.

Harris, with his coat off, was playing cards with two young employees. Two more were gaping, glassy-eyed, before a hypnoteleset. Another man was lackadaisically punching a calculator, one-finger system.

"Harris!" I thundered.

Everybody except the two men in trance swiveled my way, open-

mouthed. I walked to the hypnoteleset and snapped it off. The pair came to, groggily.

"Mum-mum-Mister Courtenay," Harris stuttered. "We didn't expect—"

"Obviously. Let's go into your office."

Unobtrusively, Kathy followed us.

"Harris," I said, "I'm disturbed, gravely disturbed, by the atmosphere here. But that can be corrected—"

His phone rang and I picked it up.

A voice said excitedly: "Ham? He's here. Make it snappy; he took a limousine."

"Thanks." I hung up. "Your tipster at the airport," I told Harris. He went white. "Show me your tally sheets," I said. "Your interview forms. Your punchcard codes. Your masters. Your sigma-progress charts. Everything, in short, that you wouldn't expect me to ask to see. Get them out."

He stood there a long, long time and finally said: "There aren't any."

"What have you got to show me?"

"Finalizations," he muttered. "Composites."

"Fakes, you mean? Fiction, like the stuff you've been feeding us over the wire?"

He nodded. His face was sick. "How could you do it, Har-

ris?" I demanded. "How could you do it?"

He poured out a confused torrent of words. He hadn't meant to. It was his first independent job. Maybe he was just no good and it was better this way. He'd tried to keep the lower personnel up to snuff while he was dogging it himself, but it couldn't be done; they sensed it and took liberties and he didn't dare check them up. His self-pitying note changed; he became weakly belligerent. What difference did it make? It was just preliminary paperwork. One man's guess was as good as another's. And anyway the whole project might go down the drain. What if he had been taking it easy? He bet there were plenty of other people who took it easy and everything came out all right just the same.

"No," I said. "You're wrong and you ought to know you're wrong. Advertising depends on the sciences of sampling, area-testing and customer research. You've knocked the props from under our program. We'll salvage what we can and start again."

He took a feeble stand: "You're wasting your time if you do that, Mr. Courtenay. I've been working closely with Mr. Runstead for a long time. I know what he thinks, and he's as big a shot as you are. He thinks this paperwork is just a lot of nonsense."

"What," I asked sharply, "have you got to back that statement up with? Letters? Memos? Taped calls?"

"I must have something like that," he said, and dived into his desk. He flipped through papers and played snatches of tape for minutes while the look of fear and frustration on his face deepened. At last he said in bewilderment:

"I can't seem to find anything, but I'm sure—"

Sure he was sure. The highest form of our art is to convince the customer without letting him know he's being convinced. This weak sister had been indoctrinated by Runstead with the unrealistic approach and then sent in on my project, to do a good job of crumming it up.

"You're fired, Harris," I said. "I wouldn't advise you to try for a job in the advertising profession after this. It would be a waste of time."

I went into the office and announced: "You're through. All of you. Collect your personal stuff and leave the office. You'll get your checks by mail."

They gaped. Beside me, Kathy murmured: "Mitch, is that really necessary?"

"You're damned right it's necessary. Did one of them tip off the home office on what was going on? No; they just relaxed

and drifted. I said it was an infection, didn't I? This is it."

Ham Harris drifted past us toward the door, hurt bewilderment on his face. He had been so sure Runstead would back him up. He had his crammed briefcase in one hand and his raincoat in the other. He didn't look at me.

I went into his vacated office and picked up the direct wire to New York. "Hester? This is Mr. Courtenay. I've just fired the entire San Diego branch. Notify Personnel and have them do whatever's necessary about pay. And get me Mr. Runstead on the line."

I drummed my fingers impatiently for a long minute and then Hester said: "Mr. Courtenay, I'm sorry to keep you waiting. Mr. Runstead's secretary says he's left for Little America on one of those tours. She says he cleaned up the A.I.G. thing and felt like a rest."

"Felt like a rest? Good God! Hester, get me a New York to Little America reservation. I'm shooting right back on the next jet. I want to just barely touch ground before I zip off to the Pole. Got it?"

"Yes, Mr. Courtenay."

I hung up and found that Kathy was staring at me. "You know, Mitch, I've been uncharitable to you in my time, kicking

about your bad temper. I can see where you got it, if this is a typical situation."

"It's not typical," I said. "It's the worst case of obstructionism I've ever seen. But there's a lot of it in our line—everybody trying to make everybody else look bad so they'll look better. Darling, I've got to get to the field now and bull my way onto the next Eastbound. Do you want to come, too?"

She hesitated. "You won't mind if I stay and do a little tourist stuff by myself?"

"No, of course not. You have a good time. When you get back to New York, I'll be there."

We kissed and I raced out. The office was clear by then and I told the building manager to lock it until further notice after Kathy left.

I looked up from the street. She waved at me from the strange, flimsy building.

VI

I SWUNG off the ramp at New York; Hester was right there. "Good girl," I told her. "When does the Pole rocket shoot off?"

"Twelve minutes, from Strip Six, Mr. Courtenay. Here are your ticket and the reservation. And some lunch in case—"

"Fine. I did miss a meal." We headed for Strip Six, with me

chewing a generated cheese sandwich as I walked. "What's up at the office?"

"Big excitement about you firing the San Diego people. Personnel sent up a complaint to Mr. Schocken and he upheld you—approximately Force Four."

That wasn't so good. Force Twelve—hurricane—would have been a blast from his office on the order of: "How dare you question the decision of a Board man working on his own project? Never let me hear again—" And so on. Force Four—rising gale, small craft make for harbor—was something else: "Gentlemen, I'm sure Mr. Courtenay had perfectly good reasons for doing what he did. Often the Big Picture is lost to the purely routine workers in our organization—"

I asked Hester: "Is Runstead's secretary just a hired hand or one of his—" I was going to say "stooges," but smoothly reversed my field — "one of his confidants?"

"She's pretty close to him," Hester said cautiously.

"What was her reaction to the San Diego business?"

"Somebody told me she laughed her head off, Mr. Courtenay." I didn't push it any harder. Finding out where I stood with respect to the big guns was legitimate. Asking about the help was asking her to rat on them. Not that there

weren't girls who did. "I expect to be right back," I told Hester. "All I want to do is straighten out something with Runstead."

"Your wife won't be along?" she asked.

"No. I'm going to tear Runstead into five or six pieces; if Dr. Nevin came along, she might try to put them back together again."

Hester laughed politely and said: "Have a pleasant trip, Mr. Courtenay." We were at the ramp on Strip Six.

IT was a miserable trip on a miserable, undersized tourist rocket. We flew low and there were prism windows at all seats, which never fail to make me airsick. You turn your head and look out and you're looking straight down. Worse, all the ads were Taunton Associates jobs. You look out the window and just as you convince your stomach that everything's all right and yourself that it's interesting country below, a sleazy, oversexed Taunton ad for some inferior product opaquely the window and one of their nagging, stupid jingles drills shrilly into your ear.

Over the Amazon Valley, for example, I was inspecting Electric Three, which happens to be the world's biggest power dam, when:

*BolsterBra, BolsterBra,
Bolsters all the way;
Don't you crumple,
Don't you slumple;
Keep them up to stay!*

The accompanying before-and-after live pix were in the worst possible taste, and I found myself thanking God again that I worked for Fowler Schocken Associates.

It was the same off Tierra del Fuego. We left the great circle course for a look at the whale fisheries, vast sea areas inclosed by booms that let the plankton in and didn't let the whales out. I was watching with fascination as a cow whale nursed her calf—it looked something like an aerial refueling operation — when the window opaqueed again for another dose of Taunton shock treatment:

Sister, do you smell like this to your mister? The olfactory went on, and I had to use my carton while the ad chirped: No wonder he's hard to get! Use Swett!

My seatmate, a nondescript customer in Universal apparel, watched sympathetically as I retched. "Too much for you, friend?" he asked, showing the maddening superiority people who suffer from motion-sickness know too well.

"Uh," I said.

"Some of those ads are enough to make anybody sick."

"Exactly what do you mean by that remark?" I asked evenly.

It frightened him. "I only meant that it smelled a little strong," he said hastily. "Just that particular ad. I didn't mean ads in general. There's nothing wrong with *me*!"

"Good for you," I said, and turned away.

Still worried, he told me: "I'm perfectly sound, friend. I come from a good family. I went to a good school. I'm in the production end myself — die-maker in Philly—but I know the stuff's got to be sold. Channels of distribution. Building markets. Vertical integration. See? I'm perfectly sound!"

"Okay," I grunted. "Then watch your mouth."

He shriveled into his half of the seat. I hadn't enjoyed squelching him, but it was a matter of principle. A kid overhearing that kind of talk could be turned into a pushover for a slick Connie.

W/E were held up over Little America while a couple of other tourist craft touched down. One of them was from India and I mellowed at the sight. That ship, from nose to tail, was Industry-built. The crewmen were Industry-trained and Industry-employed. The passengers, wak-

ing and sleeping, paid tribute minute by minute to Indiatry. And Indiatry paid tribute to Fowler Schocken Associates.

A tow truck hauled us into the great double-walled plastic doughnut that is Little America. There was only one check point. Little America is an invisible export—a dollar trap for the tourists of the world, with no military value. (There are Polar military bases, but they are small, scattered and far under the ice, run by Columbia Field Forces, Inc.) A small thorium reactor heats and powers the place. Even if some nation desperate for fissionable material were to try to get it, it wouldn't have anything worth fighting for. Windmills eke out the thorium reactor, and there's some "heat pump" arrangement that I don't understand which ekes out the windmills.

At the check point I asked about Runstead. The officer looked him up and said: "He's on the two-day tour out of New York, Thomas Cook and Son. His quarters are III-C-2205." He pulled out a map of the place and showed me that this meant third ring in, third floor up, fifth sector, twenty-second room. "You can't miss it. I can accommodate you with a nearby room, Mr. Courtenay—"

"Thanks. Later." I shoved off

and elbowed my way through crowds chattering in a dozen languages to III-C-2205 and rang the bell. No answer.

A pleasant young man said to me: "I'm the tour director. Can I help you?"

"Where's Mr. Runstead? I want to see him on business."

"Dear me. We try to get away from all that. I'll look in my register if you'll just wait a moment."

He took me to his office-bedroom-bath up the sector a way and pawed through a register. "The Starrzelius Glacier climb," he said. "He went alone. Left at 0700, checked out in electric suit with R.D.F. and rations. He should be back in five hours or so. Have you arranged for quarters yet, Mr.—?"

"Not yet. I want to go after Runstead. It's urgent." And it was. I was going to burst a blood vessel if I didn't get my hands on him.

The slightly fluttery tour director spent five minutes convincing me that the best thing to do was sign on for his tour and he'd arrange everything. Otherwise I'd be shifted from pillar to post buying and renting necessary equipment from concessionaires and then, like as not, be turned back at checkout and not able to find the concessionaires again while my vacation was

ticking away. I signed on and he beamed. He gave me a room in the sector—plenty of luxury. It would have been ten by fourteen if it hadn't been slightly wedge-shaped.

In five minutes he was dealing out equipment to me. "Power pack—strap it on so. That's the only thing that can go wrong: if you have a power failure, take a sleepy pill and don't worry. You'll freeze, but we'll pick you up before there's tissue damage. Boots. Plug them in so. Gloves. Plug them in. Coveralls. Hood. Snowglasses. Radio direction finder. Just tell the checkout guard, 'Starrzelius Glacier,' and he'll set it. Two simple switches plainly labeled 'out' and 'in.' Outward bound, it goes 'beep-beep'—ascending. Inward bound, it goes 'beep-beep'—descending. Just remember, going up the glacier, the tone goes up. Going down the glacier, the tone goes down.

"Distress signal—a big red handle. You just pull and immediately you start broadcasting. The planes will be out in fifteen minutes. You have to pay the expenses for the search and rescue, so I wouldn't yank the handle just for a ride back. It's always possible to rest, have a sip of Coffiest and keep on going. Route-marked map. Snowshoes. Gyro-compass. Rations. Mr.

Courtenay, you are equipped. I'll lead you to checkout."

The outfit wasn't as bad as it sounded. I've been more heavily bundled up against the lakeside winds in a Chicago winter. The lumpy items, like the power pack, the R.D.F. and the rations, were well distributed. The snowshoes folded into a pair of staffs with steel points for ice climbing, and went into something like an archery quiver on my back.

We passed public rooms on the way to checkout. A lot of drinking and petting seemed to be going on. The tour director sighed: "It's nice to have some of my people going out after they get here. Most of them—" He gestured. "And I have to be deaf, dumb and blind about who winds up in whose room. It's so discouraging at times!"

Checkout was very thorough. They started with my heart and worked through my equipment with particular emphasis on the power pack. I passed, and they set the R.D.F. for Starrzelius Glacier, with sharp warnings not to overdo it.

It wasn't cold inside the suit. For a moment only, I opened the face flap. Wham! I closed it again. Forty below, they had told me—a meaningless figure until my nose felt it for a split-second. I didn't need the snowshoes at the base of the towering plastic



doughnut; it was crust ice that my spike-soled shoes bit into. I oriented the map with the little gyro-compass and trudged off into the vast whiteness along with the proper bearing. From time to time I pressed my left sleeve, squeezing the molded R.D.F. switch and heard inside my hood a cheerful, reassuring "Beep-beep. Beep-beep. Beep-beep."

There were some people frolicking in one party I passed and waved cheerily at. They seemed to be Chinese or Indians. What an adventure it must be for them! But, like poor swimmers hugging a raft, they did their frolicking



almost under the shadow of Little America. Farther out, there were some people playing a game I didn't know. They had posts with bottomless baskets set up at either end of a marked-off rectangular field; the object was to toss a large silicone ball through the baskets. Still farther out, there was a skiing class with instructors in red suits.

I looked back after trudging for what seemed only a few minutes and couldn't see the red suits or Little America any more—just a gray-white shadow. "Beep-beep," my R.D.F. said, and I kept going. Runstead was going to hear from me. Soon.

The aloneness was eerie, but not unpleasant. Gradually, I began to realize why Fowler Schocken had unerringly picked me to head the Venus Section. That remarkable man had known, somehow, that I was the kind of guy who could stand and maybe even enjoy the Antarctic—or another planet.

Was this how Jack O'Shea had felt? Was this why he fumbled for words to describe Venus and was never satisfied with the words he found?

My feet plunged into a drift and I unshipped and opened the snowshoes. After a little stumbling experiment, I began an easy, sliding shuffle that was a remarkably pleasant way of covering ground. It wasn't floating, yet neither was it the solid jar of a shoe against a paved surface. We'd been selling people the notion that they were basically pioneers, and here I was buying the notion myself—and finding pride in it!

I marched the compass course by picking landmarks and going to them: an oddly curved ice hummock, a blue shadow on a waste of snow, a puffball cloud hanging low. The R.D.F. continued to confirm me. I was elated at my mastery of the wild, and after two hours I became wildly hungry with an urgency I'd never

known before in my life.

I had to squat and open a silicone-tissue bell into which I fitted. Exposing my nose cautiously from time to time, I judged the air warm enough in five minutes. I ravenously gulped the self-heated stew and tea and tried to strike a cigarette. It lit, but on the second puff I was blinded with smoke. Regretfully, I put it out against my shoe, closed my face mask, stowed the little tent and stretched happily.

After another bearing, I started off again. I told myself: "This Runstead thing is just a difference of temperament. He can't see the wide-open spaces and you can. There's no malice involved. He just thinks it's a crackpot idea because he doesn't realize that there are people who go for it. All you've got to do is explain it—"

That argument, born of well-being, crumbled at one touch of reason. Runstead was out on the glacier, too. He most certainly could see the wide-open spaces if, of all the places on Earth he could be, he chose the Starzelsius Glacier. Well, a showdown was dead ahead. "Beep-beep."

I sighted through the compass and picked a black object on my course. I couldn't quite make it out, but it was visible and it wasn't moving. I broke into a shuffling run that made me pant,

and against my will I slowed down. It was a man.

When I was twenty yards away, the man looked impatiently at his watch, and I broke into the clumsy run again.

"Matt!" I yelled. "Matt Runstead!"

"That's right, Mitch," he said, as nasty as ever. He had folded skis thrust into the snow beside him. "You're sharp today."

"What's—what's—" I panted. "I have time to spare," he said, "but you've wasted enough of it. Good-by, Mitch." While I stood there, helpless with exhaustion, he picked up his folded skis, swung them. I fell back with pain, bewilderment and shamed rage bursting my head. I felt him fumbling at my chest and then I didn't feel anything for a while.

I woke thinking I had kicked the covers off and that it was cold for early autumn. Then the ice-blue Antarctic sky knifed into my eyes and I felt the crumbly snow beneath me. It had happened, then. My head ached horribly and I was cold. Too cold. I felt and found that the power pack was missing. No heat to the suit, gloves and boots. No power to the R.D.F., coming or going. No use to pull the emergency signal.

I tottered to my feet and felt the cold grip me like a vise. There were footprints punched into the

snow leading—where? There was the trail of my snowshoes. Stiffly I took a step back along that trail, and then another, and then another.

The rations. I could thrust them into the suit, break the heat seals and let them fill the suit with temporary warmth.

Plodding step by step, I debated: "Stop and rest while you drink the ration's heat or keep moving? You need a rest. Something impossible happened. Your head is aching. You'll feel better if you sit for a moment, open a ration or two and then go on."

I didn't sit. I knew what that would mean. I fumbled a Coffest can from its pocket with fingers

that would barely obey me, and got it into my suit. My thumb didn't seem strong enough to pop the seal and I told myself: "Sit down for a moment and gather your strength. You don't have to lie down." But I wanted to.

My thumb drove through the seal and the tingling heat was painful.

It became a blur. I opened cans until I couldn't work them out of their pockets any more. And then I sat down, telling myself I'd get up in one more second for Kathy, two more seconds for Kathy, three more seconds for Kathy.

But I didn't.

—FREDERIK POHL &
C. M. KORNBLUTH

CONTINUED NEXT MONTH

FORECAST

Having read the first installment of **GRAVY PLANET**, you know that Mitchell Courtney is in serious trouble. How serious, though, not even he with his disfigured imagination could ever suspect happening to him! Next month's installment is a fictional shock attack that keeps this astonishingly ingenious novel hurtling along, actually picking up speed as it goes.

Accompanying it are two novellas that are studies in comparative literature—**STAR, BRIGHT** by Mark Clifton, a newcomer to science fiction, and **DUMB MAR-TIAN** by John Wyndham, who has been writing it for more than twenty years.

Clifton tells the emotionally moving story of a father with a desperately grave problem. Superficially, it's what any man would wish for his child . . . but only superficially.

Wyndham examines a specimen's solution for loneliness. It's a solution, right enough, but an explosive one!

Besides these fine leads, there are short stories. Wally Lay's exciting science department three you met in past questions, by the way!; and **Insurers**. You won't want to miss Mr. Lay's discussion of **WHEN WILL WORLDS COLLIDE?** It's a real surprise!

the highest mountain

By BRYCE WALTON

First one up this tallest summit in the Solar

System was a rotten egg . . . a very rotten egg!

Illustrated by BOB HAYES

BRUCE heard their feet on the gravel outside and got up reluctantly to open the door for them. He'd been reading some of Byron's poems he'd sneaked aboard the ship; after that he had been on the point of dozing off, and now one of those strangely realistic dreams would have to be postponed for a while. Funny, those dreams. There were faces in them of human beings, or of ghosts,

and other forms that weren't human at all, but seemed real and alive—except that they were also just parts of a last unconscious desire to escape death. Maybe that was it.

"'Oh that my young life were a lasting dream, my spirit not awakening till the beam of an eternity should bring the morrow,'" Bruce said. He smiled without feeling much of anything and added, "Thanks, Mr. Poe."

Jacobs and Anhauser stood outside. The icy wind cut through and into Bruce, but he didn't seem to notice. Anhauser's bulk loomed even larger in the special cold-resisting suiting. Jacobs' thin face frowned slyly at Bruce.

"Come on in, boys, and get warm," Bruce invited.

"Hey, poet, you're still here!" Anhauser said, looking astonished.

"We thought you'd be running off somewhere," Jacobs said.

Bruce reached for the suit on its hook, started climbing into it. "Where?" he asked. "Mars looks alike wherever you go. Where did you think I'd be running to?"

"Any place just so it was away from here and us," Anhauser said.

"I don't have to do that. You are going away from me. That takes care of that, doesn't it?"

"Ah, come on, get the hell out of there," Jacobs said. He pulled the revolver from its holster and pointed it at Bruce. "We got to get some sleep. We're starting up that mountain at five in the morning."

"I know," Bruce said. "I'll be glad to see you climb the mountain."

Outside, in the weird light of the double moons, Bruce looked up at the gigantic overhang of the mountain. It was unbelievable. The mountain didn't seem to belong here. He'd thought so when

they'd first hit Mars eight months back and discovered the other four rockets that had never got back to Earth—all lying side by side under the mountain's shadow, like little white chalk marks on a tallyboard.

They'd estimated its height at over 45,000 feet, which was a lot higher than any mountain on Earth. Yet Mars was much older, geologically. The entire face of the planet was smoothed into soft, undulating red hills by erosion. And there in the middle of barren nothingness rose that one incredible mountain. On certain nights when the stars were right, it had seemed to Bruce as though it were pointing an accusing finger at Earth—or a warning one.

WITH Jacobs and Anhauser and the remainder of the crew of the ship, *Mars V*, seven judges sat in a semi-circle and Bruce stood there in front of them for the inquest.

In the middle of the half-moon of inquisition, with his long legs stretched out and his hands folded on his belly, sat Captain Terrence. His uniform was black. On his arm was the silver fist insignia of the Conqueror Corps. Marsha Rennels sat on the extreme right and now there was no emotion at all on her trim, neat face.

He remembered her as she had been years ago, but at the moment he wasn't looking very hard to see anything on her face. It was too late. They had gotten her young and it was too late.

Terrence's big, square face frowned a little. Bruce was aware suddenly of the sound of the bleak, never-ending wind against the plastikene shelter. He remembered the strange misty shapes that had come to him in his dreams, the voices that had called to him, and how disappointed he had been when he woke from them.

"This is a mere formality," Terrence finally said, "since we all know you killed Lieutenant Doran a few hours ago. Marsha saw you kill him. Whatever you say goes on the record, of course."

"For whom?" Bruce asked.

"What kind of question is that? For the authorities on Earth when we get back."

"When you get back? Like the crews of those other four ships out there?" Bruce laughed without much humor.

Terrence rubbed a palm across his lips, dropped the hand quickly again to his belly. "You want to make a statement or not? You shot Doran in the head with a rifle. No provocation for the attack. You've wasted enough of my time with your damn arguments and anti-social behavior.

This is a democratic group. Everyone has his say. But you've said too much, and done too much. Freedom doesn't allow you to go around killing fellow crewmembers!"

"Any idea that there was any democracy or freedom left died on Venus," Bruce said.

"Now we get another lecture!" Terrence exploded. He leaned forward. "You're sick, Bruce. They did a bad psych job on you. They should never have sent you on this trip. We need strength, all the strength we can find. You don't belong here."

"I know," Bruce agreed indifferently. "I was drafted for this trip. I told them I shouldn't be brought along. I said I didn't want any part of it."

"Because you're afraid. You're not Conqueror material. That's why you backed down when we all voted to climb the mountain. And what the devil does Venus—?"

Max Drexel's freckles slipped into the creases across his high forehead. "Haven't you heard him expounding on the injustice done to the Venusian aborigines, Captain? If you haven't, you aren't thoroughly educated to the crackpot idealism still infecting certain people."

"I haven't heard it," Terrence admitted. "What injustice?"

Bruce said, "I guess it couldn't

really be considered an injustice any longer. Values have changed too much. Doran and I were part of the crew of that first ship to hit Venus, five years ago. Remember? One of the New Era's more infamous dates. Drexel says the Venusians were aborigines. No one ever got a chance to find out. We ran into this village. No one knows how old it was. There were intelligent beings there. One community left on the whole planet, maybe a few thousand inhabitants. They made their last mistake when they came out to greet us. Without even an attempt at communication, they were wiped out. The village was burned and everything alive in it was destroyed."

Bruce felt the old weakness coming into his knees, the sweat beginning to run down his face. He took a deep breath and stood there before the cold nihilistic stares of fourteen eyes.

"No," Bruce said. "I apologize. None of you know what I'm talking about."

Terrence nodded. "You're psycho. It's as simple as that. They pick the most capable for these conquests. Even the flights are processes of elimination. Eventually we get the very best, the most resilient, the real conquering blood. You just don't pass, Bruce. Listen, what do you think gives you the right to stand

here in judgment against the laws of the whole Solar System?"

"There are plenty on Earth who agree with me," Bruce said. "I can say what I think now because you can't do more than kill me and you'll do that regardless . . ."

He stopped. This was ridiculous, a waste of his time. And theirs. They had established a kind of final totalitarianism since the New Era. The psychologists, the Pavlovian Reflex boys, had done that. If you didn't want to be reconditioned to fit into the social machine like a human vacuum tube, you kept your mouth shut. And for many, when the mouth was kept shut long enough, the mind pretty well forgot what it had wanted to open the mouth for in the first place.

A minority in both segments of a world split into two factions. Both had been warring diplomatically and sometimes physically, for centuries, clung to old ideas of freedom, democracy, self-determinism, individualism. To most, the words had no meaning now. It was a question of which set of conquering heroes could conquer the most space first. So far, only Venus had fallen. They had done a good, thorough job there. Four ships had come to Mars and their crews had disappeared. This was the fifth attempt—

TERRENCE said, "why did you shoot Doran?"

"I didn't like him enough to take the nonsense he was handing me, and when he shot the—" Bruce hesitated.

"What? When he shot what?"

Bruce felt an odd tingling in his stomach. The wind's voice seemed to sharpen and rise to a kind of wail.

"All right, I'll tell you. I was sleeping, having a dream. Doran woke me up. Marsha was with him. I'd forgotten about that geological job we were supposed to be working on. I've had these dreams ever since we got here."

"What kind of dreams?"

Someone laughed.

"Just fantastic stuff. Ask your Pavlovian there," Bruce said. "People talk to me, and there are other things in the dreams. Voices and some kind of shapes that aren't what you would call human at all."

Someone coughed. There was obvious embarrassment in the room.

"It's peculiar, but many faces and voices are those of crew members of some of the ships out there, the ones that never got back to Earth."

Terrence grinned. "Ghosts, Bruce?"

"Maybe. This planet may not be a dead ball of clay. I've had a feeling there's something real

in the dreams, but I can't figure it out. You're still interested?"

Terrence nodded and glanced to either side.

"We've seen no indication of any kind of life whatsoever," Bruce pointed out. "Not even an insect, or any kind of plant life except some fungi and lichen down in the crevices. That never seemed logical to me from the start. We've covered the planet everywhere except one place—"

"The mountain," Terrence said. "You've been afraid even to talk about scaling it."

"Not afraid," Bruce objected. "I don't see any need to climb it. Coming to Mars, conquering space, isn't that enough? It happens that the crew of the first ship here decided to climb the mountain, and that set a precedent. Every ship that has come here has had to climb it. Why? Because they had to accept the challenge. And what's happened to them? Like you, they all had the necessary equipment to make a successful climb, but no one's ever come back down. No contact with anything up there."

"Captain, I'm not accepting a ridiculous challenge like that. Why should I? I didn't come here to conquer anything, even a mountain. The challenge of coming to Mars, of going on to where ever you guys intend going before something bigger than you

are stops you—it doesn't interest me."

"Nothing's bigger than the destiny of Earth!" Terrence said, sitting up straight and rigid.

"I know," Bruce said. "Anyway, I got off the track. As I was saying, I woke up from this dream and Marsha and Doran were there. Doran was shaking me. But I didn't seem to have gotten entirely awake; either that or some part of the dream was real, because I looked out the window — something was out there, looking at me. It was late, and at first I thought it might be a shadow. But it wasn't. It was misty, almost translucent, but I think it was something alive. I had a feeling it was intelligent, maybe very intelligent. I could feel something in my mind. A kind of beauty and softness and warmth. I kept looking—"

His throat was getting tight. He had difficulty talking. "Doran asked me what I was looking at, and I told him. He laughed. But he looked. Then I realized that maybe I wasn't still dreaming. Doran saw it, too, or thought he did. He kept looking and finally he jumped and grabbed up his rifle and ran outside. I yelled at him. I kept on yelling and ran after him. 'It's intelligent, whatever it is!' I kept saying. 'How do you know it means any harm?' But I heard Doran's rifle go off

before I could get to him. And whatever it was we saw, I didn't see it any more. Neither did Doran. Maybe he killed it. I don't know. He had to kill it. That's the way you think."

"What? Explain that remark."

"That's the philosophy of conquest—don't take any chances with aliens. They might hinder our advance across the Universe. So we kill everything. Doran acted without thinking at all. Conditioned to kill everything that doesn't look like us. So I hit Doran and took the gun away from him and killed him. I felt sick, crazy with rage. Maybe that's part of it. All I know is that I thought he deserved to die and that I had to kill him, so I did."

"Is that all, Bruce?"

"That's about all. Except that I'd like to kill all of you. And I would if I had the chance."

"That's what I figured," Terrence turned to the psychologist, a small wiry man who sat there constantly fingering his ear. "Stromberg, what do you think of this gobbledegook? We know he's crazy. But what hit him? You said his record was good up until a year ago."

Stromberg's voice was monotonous, like a voice off of a tape. "Schizophrenia with mingled delusions of persecution. The schizophrenia is caused by inner con-

flict—indecision between the older values and our present ones which he hasn't been able to accept. A complete case history would tell why he can't accept our present attitudes. I would say that he has an incipient fear of personal inadequacy, which is why he fears our desire for conquest. He's rationalized, built up a defense which he's structured with his idealism, foundationed with Old Era values. Retreat into the past, an escape from his own present feelings of inadequacy. Also, he escapes into these dream fantasies."

"Yes," Terrence said. "But how does that account for Doran's action? Doran must have seen something—"

"Doran's charts show high suggestibility under stress. Another weak personality eliminated. Let's regard it that way. He *imagined* he saw something." He glanced at Marsha. "Did you see anything?"

She hesitated, avoiding Bruce's eyes. "Nothing at all. There wasn't anything out there to see, except the dust and rocks. That's all there is to see here. We could stay a million years and never see anything else. A shadow maybe—"

"All right," Terrence interrupted. "Now, Bruce, you know the law regulating the treatment of serious psycho cases in space?"

"Yes. Execution."

"No facilities for handling such cases en route back to Earth."

"I understand. No apologies necessary, Captain."

Terrence shifted his position. "However, we've voted to grant you a kind of leniency. In exchange for a little further service from you, you can remain here on Mars after we leave. You'll be left food-concentrates to last a long time."

"What kind of service?"

"Stay by the radio and take down what we report as we go up the mountain."

"Why not?" Bruce said. "You aren't certain you're coming back, then?"

"We might not," Terrence admitted calmly. "Something's happened to the others. We're going to find out what and we want it recorded. None of us want to back down and stay here. You can take our reports as they come in."

"I'll do that," Bruce said. "It should be interesting."

BRUCE watched them go, away and up and around the immediate face of the mountain in the bleak cold of the Martian morning. He watched them disappear behind a high ledge, tied together with plastic rope like convicts.

He stayed by the radio. He lost

track of time and didn't care much if he did. Sometimes he took a heavy sedative and slept. The sedative prevented the dreams. He had an idea that the dreams might be so pleasant that he wouldn't wake up. He wanted to listen to Terrence as long as the captain had anything to say. It was nothing but curiosity.

At fifteen thousand feet, Terrence reported only that they were climbing.

At twenty thousand feet, Terrence said, "We're still climbing, and that's all I can report, Bruce. It's worth coming to Mars for—to accept a challenge like this!"

At twenty-five thousand feet, Terrence reported, "We've put on oxygen masks. Jacobs and Drexel have developed some kind of altitude sickness and we're taking a little time out. It's a magnificent sight up here. I can imagine plenty of tourists coming to Mars one of these days, just to climb this mountain! Mt. Everest is a pimple compared with this! What a feeling of power, Bruce!"

From forty thousand feet, Terrence said, "We gauged this mountain at forty-five thousand. But here we are at forty and there doesn't seem to be any top. We can see up and up and the mountain keeps on going. I don't understand how we could have made such an error in our computations. I talked with Burton. He

doesn't see how a mountain this high could still be here when the rest of the planet has been worn so smooth."

And then from fifty-three thousand feet, Terrence said with a voice that seemed slightly strained: "No sign of any of the crew of the other four ships yet. Ten in each crew, that makes fifty. Not a sign of any of them so far, but then we seem to have a long way left to climb—"

Bruce listened and noted and took sedatives and opened cans of food concentrates. He smoked and ate and slept. He had plenty of time. He had only time and the dreams which he knew he could utilize later to take care of the time.

From sixty thousand feet, Terrence reported, "I had to shoot Anhauser a few minutes ago! He was dissenting. Hear that, Bruce? One of my most dependable men. We took a vote. A mere formality, of course, whether we should continue climbing or not. We knew we'd all vote to keep on climbing. And then Anhauser dissented. He was hysterical. He refused to accept the majority decision. 'I'm going back down!' he yelled. So I had to shoot him. Imagine a man of his apparent caliber turning anti-democratic like that! This mountain will be a great tester for us in the future. We'll test everybody, find out quickly

who the weaklings are."

Bruce listened to the wind. It seemed to rise higher and higher. Terrence, who had climbed still higher, was calling. "Think of it! What a conquest! No man's ever done a thing like this. Like Stromberg says, it's symbolic! We can build spaceships and reach other planets, but that's not actual physical conquest. We feel like gods up here. We can see what we are now. We can see how it's going to be—"

Once in a while Terrence demanded that Bruce say something to prove he was still there taking down what Terrence said. Bruce obliged. A long time passed, the way time does when no one cares. Bruce stopped taking the sedatives finally. The dreams came back and became, somehow, more real each time. He needed the companionship of the dreams.

It was very lonely sitting there without the dreams, with nothing but Terrence's voice ranting excitedly on and on. Terrence didn't seem real any more; certainly not as real as the dreams.

THE problem of where to put the line between dream and reality began to worry Bruce. He would wake up and listen and take down what Terrence was saying, and then go to sleep again with increasing expectancy. His dream took on continuity. He

could return to the point where he had left it, and it was the same—allowing even for the time difference necessitated by his periods of sleep.

He met people in the dreams, two girls and a man. They had names: Pietro, Marlene, Helene.

Helene he had seen from the beginning, but she became more real to him all the time, until he could talk with her. After that, he could also talk with Marlene and Pietro, and the conversations made sense. Consistently, they made sense.

The Martian landscape was entirely different in the dreams. Green valleys and rivers, or actually wide canals, with odd trees trailing their branches on the slow, peacefully gliding currents. Here and there were pastel-colored cities and there were things drifting through them that were alive and intelligent and soft and warm and wonderful to know.

"... dreams, in their vivid coloring of life, as in that fleeting, shadowy, misty strife of semblance with reality which brings to the delirious eye more lovely things of paradise and love—and all our own!—than young Hope in his sunniest hour hath known ..."

So sometimes he read poetry, but even that was hardly equal to the dreams.

And then he would wake up

and listen to Terrence's voice. He would look out the window over the barren frigid land where there was nothing but seams of worn land, like scabs under the brazen sky.

"If I had a choice," he thought, "I wouldn't ever wake up at all again. The dreams may not be more real, but they're preferable."

Dreams were supposed to be wishful thinking, primarily, but he couldn't live in them very long. His body would dry up and he would die. He had to stay awake enough to put a little energy back into himself. Of course, if he died and lost the dreams, there would be one compensation—he would also be free of Terrence and the rest of them who had learned that the only value in life lay in killing one's way across the Cosmos.

But then he had a feeling Terrence's voice wouldn't be annoying him much more anyway. The voice was unreal, coming out of some void. He could switch off Terrence any time now, but he was still curious.

"Bruce—Bruce, you still there? Listen, we're up here at what we figure to be five hundred thousand feet! It is impossible. We keep climbing and now we look up and we can see up and up and there the mountain is going up and up—"

And some time later: "Bruce,

Marsha's dying! We don't know what's the matter. We can't find any reason for it. She's lying here and she keeps laughing and calling your name. She's a woman, so that's probably it. Women don't have real guts."

Bruce bent toward the radio. Outside the shelter, the wind whistled softly at the door.

"Marsha," he said.

"Bruce—"

She hadn't said his name that way for a long time.

"Marsha, remember how we used to talk about human values? I remember how you seemed to have something maybe different from the others. I never thought you'd really buy this will to conquer, and now it doesn't matter . . ."

He listened to her voice, first the crazy laughter, and then a whisper. "Bruce, hello down there." Her voice was all mixed up with fear and hysteria and mockery. "Bruce darling, are you lonely down there? I wish I were with you, safe . . . free . . . warm. I love you. Do you hear that? I really love you, after all. After all . . ."

Her voice drifted away, came back to him "We're climbing the highest mountain. What are you doing there, relaxing where it's peaceful and warm and sane? You always were such a calm guy. I remember now. What are



you doing—reading poetry while we climb the mountain? What was that, Bruce—that one about the mountain you tried to quote to me last night before you . . . I can't remember it now. Darling, what . . . ?"

HE stared at the radio. He hesitated, reached out and switched on the mike. He got through to her.

"Hello, hello, darling," he whispered. "Marsha, can you hear me?"

"Yes, yes. You down there, all warm and cozy, reading poetry, darling. Where you can see both ways instead of just up and down, up and down."

He tried to imagine where she was now as he spoke to her, how she looked. He thought of Earth and how, it had been there, years ago, with Marsha. Things had seemed so different then. There was something of that hope in his voice now as he spoke to her, yet not directly to her, as he looked out the window at the naked frigid sky and the barren rocks.

"... and there is nowhere to go
from the top of a mountain,
But down, my dear;
And the springs that flow on the
floor of the valley
Will never seem fresh or clear
For thinking of the glitter of the
mountain water
In the feathery green of the
year . . ."

The wind stormed over the shelter in a burst of power, buried the sound of his own voice.

"Marsha, are you still there?"

"What the devil's the idea, poetry at a time like this, or any time?" Terrence demanded. "Listen, you taking this down? We haven't run into any signs of the others. Six hundred thousand feet, Bruce! We feel our destiny. We conquer the Solar System. And we'll go out and out, and we'll climb the highest mountain, the highest mountain anywhere. We're going up and up. We've voted on it. Unanimous. We go on. On to the top, Bruce! Nothing can stop us. If it takes ten years, a hundred, a thousand years, we'll find it. We'll find the top! Not the top of this world—the top of everything. The top of the universe!"

Later, Terrence's voice broke off in the middle of something or other—Bruce couldn't make any sense out of it at all—and turned into crazy yells that faded out and never came back.

Bruce figured the others might still be climbing somewhere, or maybe they were dead. Either way it wouldn't make any difference to him. He knew they would never come back down.

He was switching off the radio for good when he saw the coloration break over the window. It was the same as the dream, but

for an instant, dream and reality seemed fused like two superimposed film negatives.

He went to the window and looked out. The comfortable little city was out there, and the canal flowing past through a pleasantly cool yet sunny afternoon. Purple mist blanketed the knees of low hills and there was a valley, green and rich with the trees high and full beside the softly flowing canal water.

The filmy shapes that seemed alive, that were partly translucent, drifted along the water's edge, and birds as delicate as colored glass wavered down the wind.

He opened the shelter door and went out. The shelter looked the same, but useless now. How did the shelter of that bleak world get into this one, where the air was warm and fragrant, where there was no cold, from that world into this one of his dreams?

The girl—Helene—was standing there leaning against a tree, smoking a cigarette.

He walked toward her, and stopped. In the dream it had been easy, but now he was embarrassed, in spite of the intimacy that had grown between them. She wore the same casual slacks and sandals. Her hair was brown. She was not particularly beautiful, but she was comfortable to look at because she seemed so

peaceful. Content, happy with what was and only what was.

He turned quickly. The shelter was still there, and behind it the row of spaceships—not like chalk marks on a tallyboard now, but like odd relics that didn't belong there in the thick green grass. Five ships instead of four.

There was his own individual shelter beyond the headquarters building, and the other buildings. He looked up.

There was no mountain.

FOR one shivery moment he knew fear. And then the fear went away, and he was ashamed of what he had felt. What he had feared was gone now, and he knew it was gone for good and he would never have to fear it again.

"Look here, Bruce. I wondered how long it would take to get it through that thick poetic head of yours!"

"Get what?" He began to suspect what it was all about now, but he wasn't quite sure yet.

"Smoke?" she said.

He took one of the cigarettes and she lighted it for him and put the lighter back into her pocket.

"It's real nice here," she said. "Isn't it?"

"I guess it's about perfect."

"It'll be easy. Staying here, I mean. We won't be going to

Earth ever again, you know."

"I didn't know that, but I didn't think we ever would again."

"We wouldn't want to anyway, would we, Bruce?"

"No."

He kept on looking at the place where the mountain had been. Or maybe it still was; he couldn't make up his mind yet. Which was and which was not? That barren icy world without life, or this?

"*'Is all that we see or seem,'*" he whispered, half to himself, "*'but a dream within a dream.'*"

She laughed softly. "Poe was ahead of his time," she said. "You still don't get it, do you? You don't know what's been happening?"

"Maybe I don't."

She shrugged, and looked in the direction of the ships. "Poor guys. I can't feel much hatred toward them now. The Martians give you a lot of understanding of the human mind—after they've accepted you, and after you've lived with them awhile. But the mountain climbers—we can see now—it's just luck, chance, we weren't like them. A deviant is a child of chance."

"Yes," Bruce said. "There's a lot of people like us on Earth, but they'll never get the chance—the chance we seem to have here, to live decently . . ."

"You're beginning to see now

which was the dream," she said and smiled. "But don't be pessimistic. Those people on Earth will get their chance, too, one of these fine days. The Conquerors aren't getting far. Venus, and then Mars, and Mars is where they stop. They'll keep coming here and climbing the mountain and finally there won't be any more. It won't take so long."

She rose to her toes and waved and yelled. Bruce saw Pietro and Marlene walking hand in hand up the other side of the canal. They waved back and called and then pushed off into the water in a small boat, and drifted away and out of sight around a gentle turn.

She took his arm and they walked along the canal toward where the mountain had been, or still was—he didn't know.

A quarter of a mile beyond the canal, he saw the high mound of red, naked hill, corroded and ugly, rising up like a scar of the surrounding green.

She wasn't smiling now. There were shadows on her face as the pressure on his arm stopped him.

"I was on the first ship and Marlene on the second. None like us on the third, and on the fourth ship was Pietro. All the others had to climb the mountain—" She stopped talking for a moment, and then he felt the pressure of her fingers on his arm.

"I'm very glad you came on the fifth," she whispered. "Are you glad now?"

"I'm very glad," he said.

"The Martians tested us," she explained. "They're masters of the mind. I guess they've been grinding along through the evolutionary mill a darn long time, longer than we could estimate now. They learned the horror we're capable of from the first ship—the Conquerors, the climbers. The Martians knew more like them would come and go on into space, killing, destroying for no other reason than their own sickness. Being masters of the mind, the Martians are also capable of hypnosis—no, that's not really the word, only the closest our language comes to naming it. Suggestion so deep and strong that it seems real to one human or a million or a billion; there's no limit to the number that can be influenced. What the people who came off those ships saw wasn't real. It was partly what the Martians wanted them to see and feel—but most of it, like the desire to climb the mountain, was as much a part of the Conquerors' own psychic drive as it was the suggestion of the Martians."

She waved her arm slowly to describe a peak. "The Martians made the mountain real. So real that it could be seen from space,

measured by instruments . . . even photographed and chipped for rock samples. But you'll see how that was done, Bruce, and realize that this and not the mountain of the Conquerors is the reality of Mars. This is the Mars no Conqueror will ever see."

THEY walked toward the ugly red mound that jutted above the green. When they came close enough, he saw the bodies lying there . . . the remains, actually, of what had once been bodies. He felt too sickened to go on walking.

"It may seem cruel now," she said, "but the Martians realized that there is no cure for the will to conquer. There is no safety from it, either, as the people of Earth and Venus discovered, unless it is given an impossible obstacle to overcome. So the Martians provided the Conquerors with a mountain. They themselves wanted to climb. They had to."

He was hardly listening as he walked away from Helene toward the eroded hills. The crew members of the first four ships were skeletons tied together with imperishably strong rope about their waists. Far beyond them were those from *Mars V*, too freshly dead to have decayed much . . . Anhauser with his rope cut, a bullet in his head; Jacobs and Martha and the others . . . Terrence much past them all. He

had managed to climb higher than anyone else and he lay with his arms stretched out, his fingers still clutching at rock outcroppings.

The trail they left wound over the ground, chipped in places for holds, red elsewhere with blood from torn hands. Terrence was more than twelve miles from the ship—horizontally.

Bruce lifted Marsha and carried her back over the rocky dust, into the fresh fragrance of the high grass, and across it to the shade and peace beside the canal.

He put her down. She looked peaceful enough, more peaceful than that other time, years ago, when the two of them seemed to have shared so much, when the future had not yet destroyed her. He saw the shadow of Helene bend across Marsha's face against the background of the silently flowing water of the cool, green canal.

"You loved her?"

"Once," Bruce said. "She might have been sane. They got her when she was young. Too young to fight. But she would have, I think, if she'd been older when they got her."

He sat looking down at Marsha's face, and then at the water with the leaves floating down it.

" . . . And the springs that flow on the floor of the valley

will never seem fresh or clear for thinking of the glitter of the mountain water in the feathery green of the year . . . "

He stood up, walked back with Helene along the canal toward the calm city. He didn't look back.

"They've all been dead quite a while," Bruce said wonderingly. "Yet I seemed to be hearing from Terrence until only a short time ago. Are—are the climbers still climbing—somewhere, Helene?"

"Who knows?" Helene answered softly. "Maybe. I doubt if even the Martians have the answer to that."

They entered the city.

—BRYCE WALTON

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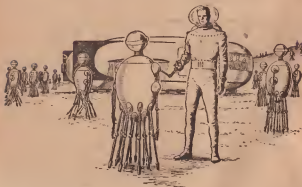
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Illustrated by E.M.S.H.

of the Void

By MICHAEL SHAARA



IN the region of the Coal Sack Nebula, on the dead fourth planet of a star called Ty-ban, Captain Steffens of the Mapping Command stood counting buildings. Eleven. No, twelve. He wondered if there was any significance in the number. He had no idea.

"What do you make of it?" he asked.

Lieutenant Ball, the executive officer of the ship, almost tried to scratch his head before he remembered that he was wearing a spacesuit.

"Looks like a temporary camp," Ball said. "Very few buildings, and all built out of native materials, the only stuff available. Castaways, maybe?"

Steffens was silent as he walked

up onto the rise. The flat weathered stone jutted out of the sand before him.

"No inscriptions," he pointed out.

"They would have been worn away. See the wind grooves? Anyway, there's not another building on the whole damn planet. You wouldn't call it much of a civilization."

"You don't think these are native?"

Ball said he didn't. Steffens nodded.

Standing there and gazing at the stone, Steffens felt the awe of great age. He had a hunch, deep and intuitive, that this was old—too old. He reached out a gloved hand, ran it gently over the smooth stone ridges of the wall. Although the atmosphere was very thin, he noticed that the buildings had no airlocks.

Ball's voice sounded in his helmet: "Want to set up shop, Skipper?"

Steffens paused. "All right, if you think it will do any good."

"You never can tell. Excavation probably won't be much use. These things are on a raised rock foundation, swept clean by the wind. And you can see that the rock itself is native—" he indicated the ledge beneath their feet—"and was cut out a long while back."

"How long?"

Ball toed the sand uncomfortably. "I wouldn't like to say off-hand."

"Make a rough estimate."

Ball looked at the captain, knowing what was in his mind. He smiled wryly and said: "Five thousand years? Ten thousand? I don't know."

Steffens whistled.

Ball pointed again at the wall. "Look at the striations. You can tell from that alone. It would take even a brisk Earth wind at least several thousand years to cut that deep, and the wind here has only a fraction of that force."

The two men stood for a long moment in silence. Man had been in interstellar space for three hundred years and this was the first uncovered evidence of an advanced, space-crossing, alien race. It was an historic moment, but neither of them was thinking about history.

Man had been in space for only three hundred years. Whatever had built these had been in space for thousands of years.

Which ought to give them, thought Steffens uncomfortably, one hell of a good head-start.

WHILE the excav crew worked steadily, turning up nothing, Steffens remained alone among the buildings. Ball came out to him, looked dryly at the walls.

"Well," he said, "whoever they were, we haven't heard from them since."

"No? How can you be sure?" Steffens grunted. "A space-borne race was roaming this part of the Galaxy while men were still pitching spears at each other, *that* long ago. And this planet is only a parsec from Varius II, a civilization as old as Earth's. Did whoever built these get to Varius? Or did they get to Earth? How can you know?"

He kicked at the sand distractedly. "And most important, where are they now? A race with several thousand years . . ."

"Fifteen thousand," Ball said. When Steffens looked up, he added: "That's what the geology boys say. Fifteen thousand, at the least."

Steffens turned to stare unhappily at the buildings. When he realized now how really old they were, a sudden thought struck him.

"But why buildings? Why did they have to build in stone, to last? There's something wrong with that. They shouldn't have had a need to build, unless they were castaways. And castaways would have left something behind. The only reason they would need a camp would be—"

"If the ship left and some of them stayed."

Steffens nodded. "But then the

ship must have come back. Where did it go?" He ceased kicking at the sand and looked up into the blue-black midday sky. "We'll never know."

"How about the other planets?" Ball asked.

"The report was negative: Inner too hot, outer too heavy and cold. The third planet is the only one with a decent temperature range, but *it* has a CO₂ atmosphere."

"How about moons?"

Steffens shrugged. "We could try them and find out."

THE third planet was a blank, gleaming ball until they were in close, and then the blankness resolved into folds and piling clouds and dimly, in places, the surface showed through. The ship went down through the clouds, falling the last few miles on her brakers. They came into the misty gas below, leveled off and moved along the edge of the twilight zone.

The moons of this solar system had yielded nothing. The third planet, a hot, heavy world which had no free oxygen and from which the monitors had detected nothing, was all that was left. Steffens expected nothing, but he had to try.

At a height of several miles, the ship moved up the zone, scanning, moving in the familiar

slow spiral of the Mapping Command. Faint dark outlines of bare rocks and hills moved by below.

Steffens turned the screen to full magnification and watched silently.

After a while he saw a city.

The main screen being on, the whole crew saw it. Someone shouted and they stopped to stare, and Steffens was about to call for altitude when he saw that the city was dead.

He looked down on splintered walls that were like cloudy glass pieces rising above a plain, rising in a shattered circle. Near the center of the city, there was a huge, charred hole at least three miles in diameter and very deep. In all the piled rubble, nothing moved.

Steffens went down low to make sure, then brought the ship around and headed out across the main continent into the bright area of the sun. The rocks rolled by below, there was no vegetation at all, and then there were more cities—all with the black depression, the circular stamp that blotted away and fused the buildings into nothing.

No one on the ship had anything to say. None had ever seen a war, for there had not been war on Earth or near it for more than three hundred years.

The ship circled around to the dark side of the planet. When

they were down below a mile, the radiation counters began to react. It became apparent, from the dials, that there could be nothing alive.

After a while Ball said: "Well, which do you figure? Did our friends from the fourth planet do this, or were they the same people as these?"

Steffens did not take his eyes from the screen. They were coming around to the daylight side.

"We'll go down and look for the answer," he said. "Break out the radiation suits."

He paused, thinking. If the ones on the fourth planet were alien to this world, they were from outer space, could not have come from one of the other planets here. They had starships and were warlike. Then, thousands of years ago. He began to realize how important it really was that Ball's question be answered.

When the ship had gone very low, looking for a landing site, Steffens was still by the screen. It was Steffens, then, who saw the thing move.

Down far below, it had been a still black shadow, and then it moved. Steffens froze. And he knew, even at that distance, that it was a robot.

Tiny and black, a mass of hanging arms and legs, the thing went gliding down the slope of a hill. Steffens saw it clearly for a

full second, saw the dull ball of its head tilt upward as the ship came over, and then the hill was past.

QUICKLY Steffens called for height. The ship bucked beneath him and blasted straight up; some of the crew went crashing to the deck. Steffens remained by the screen, increasing the magnification as the ship drew away. And he saw another, then two, then a black gliding group, all matched with bunches of hanging arms.

Nothing alive but robots, he thought, robots. He adjusted to full close up as quickly as he could and the picture focused on the screen. Behind him he heard a crewman grunt in amazement.

A band of clear, plasticlike stuff ran round the head—it would be the eye, a band of eye that saw all ways. On the top of the head was a single round spot of the plastic, and the rest was black metal, joined, he realized, with fantastic perfection. The angle of sight was now almost perpendicular. He could see very little of the branching arms of the trunk, but what had been on the screen was enough. They were the most perfect robots he had ever seen.

The ship leveled off. Steffens had no idea what to do; the sudden sight of the moving things had unnerved him. He had al-

ready sounded the alert, flicked out the defense screens. Now he had nothing to do. He tried to concentrate on what the League Law would have him do.

The Law was no help. Contact with planet-bound races was forbidden under any circumstances. But could a bunch of robots be called a race? The Law said nothing about robots because Earthmen had none. The building of imaginative robots was expressly forbidden. But at any rate, Steffens thought, he had made contact already.

While Steffens stood by the screen, completely bewildered for the first time in his space career, Lieutenant Ball came up, hobbling slightly. From the bright new bruise on his cheek, Steffens guessed that the sudden climb had caught him unaware. The exec was pale with surprise.

"What were they?" he said blankly. "Lord, they looked like robots!"

"They were."

Ball stared confoundedly at the screen. The things were now a confusion of dots in the mist.

"Almost humanoid," Steffens said, "but not quite."

Ball was slowly absorbing the situation. He turned to gaze inquiringly at Steffens.

"Well, what do we do now?"

Steffens shrugged. "They saw us. We could leave now and let

them quite possibly make a . . . a legend out of our visit, or we could go down and see if they tie in with the buildings on Tyban IV."

"Can we go down?"

"Legally? I don't know. If they are robots, yes, since robots cannot constitute a race. But there's another possibility." He tapped his fingers on the screen continuously. "They don't have to be robots at all. They could be the natives."

Ball gulped. "I don't follow you."

"They could be the original inhabitants of this planet — the brains of them, at least, protected in radiation-proof metal. Anyway," he added, "they're the most perfect mechanicals I've ever seen."

Ball shook his head, sat down abruptly. Steffens turned from the screen, strode nervously across the Main Deck, thinking.

The Mapping Command, they called it. Theoretically, all he was supposed to do was make a closeup examination of unexplored systems, checking for the presence of life-forms as well as for the possibilities of human colonization. Make a check and nothing else. But he knew very clearly that if he returned to Sirius base without investigating this robot situation, he could very well be court-martialed one way

or the other, either for breaking the Law of Contact or for dereliction of duty.

And there was also the possibility, which abruptly occurred to him, that the robots might well be prepared to blow his ship to hell and gone.

He stopped in the center of the deck. A whole new line of thought opened up. If the robots were armed and ready . . . could this be an outpost?

An outpost!

He turned and raced for the bridge. If he went in and landed and was lost, then the League might never know in time. If he went in and stirred up trouble . . .

The thought in his mind was scattered suddenly, like a mist blown away. A voice was speaking in his mind, a deep calm voice that seemed to say:

"Greetings. Do not be alarmed. We do not wish you to be alarmed. Our desire is only to serve . . ."

"**G**REETINGS, it said! Greetings!" Ball was mumbling incredulously through shocked lips.

Everyone on the ship had heard the voice. When it spoke again, Steffens was not sure whether it was just one voice or many voices.

"We await your coming," it said gravely, and repeated: "Our desire is only to serve."

And then the robots sent a picture.

As perfect and as clear as a tridim movie, a rectangular plate took shape in Steffen's mind. On the face of the plate, standing alone against a background of red-brown, bare rocks, was one of the robots. With slow, perfect movement, the robot carefully lifted one of the hanging arms of its side, of its right side, and extended it toward Steffens, a graciously offered hand.

Steffens felt a peculiar, compelling urge to take the hand, realized right away that the urge to take the hand was not entirely his. The robot mind had helped.

When the picture vanished, he knew that the others had seen it. He waited for a while; there was no further contact, but the feeling of the robot's urging was still strong within him. He had an idea that, if they wanted to, the robots could control his mind. So when nothing more happened, he began to lose his fear.

While the crew watched in fascination, Steffens tried to talk back. He concentrated hard on what he was saying, said it aloud for good measure, then held his own hand extended in the robot manner of shaking hands.

"Greetings," he said, because it was what *they* had said, and explained: "We have come from the stars."

It was overly dramatic, but so was the whole situation. He wondered baffledly if he should have let the Alien Contact crew handle it. Order someone to stand there, feeling like a fool, and think a message?

No, it was his responsibility; he had to go on:

"We request—we respectfully request permission to land upon your planet."

STEFFENS had not realized that there were so many.

They had been gathering since his ship was first seen, and now there were hundreds of them clustered upon the hill. Others were arriving even as the skiff landed; they glided in over the rocky hills with fantastic ease and power, so that Steffens felt a momentary anxiety. Most of the robots were standing with the silent immobility of metal. Others threaded their way to the fore and came near the skiff, but none touched it, and a circle was cleared for Steffens when he came out.

One of the near robots came forward alone, moving, as Steffens now saw, on a number of short, incredibly strong and agile legs. The black thing paused before him, extended a hand as it had done in the picture. Steffens took it, he hoped, warmly; felt the power of the metal through the glove of his suit.

"Welcome," the robot said, speaking again to his mind, and now Steffens detected a peculiar alteration in the robot's tone. It was less friendly now, less—Steffens could not understand—somehow less interested, as if the robot had been — expecting someone else.

"Thank you," Steffens said. "We are deeply grateful for your permission to land."

"Our desire," the robot repeated mechanically, "is only to serve."

Suddenly, Steffens began to feel alone, surrounded by machines. He tried to push the thought out of his mind, because he knew that they *should* seem inhuman. But . . .

"Will the others come down?" asked the robot, still mechanically.

Steffens felt his embarrassment. The ship lay high in the mist above, jets throbbing gently.

"They must remain with the ship," Steffens said aloud, trusting to the robot's formality not to ask him why. Although, if they could read his mind, there was no need to ask.

For a long while, neither spoke, long enough for Steffens to grow tense and uncomfortable. He could not think of a thing to say, the robot was obviously waiting, and so, in desperation, he signaled the Aliencon men to come

on out of the skiff.

They came, wonderingly, and the ring of robots widened. Steffens heard the one robot speak again. The voice was now much more friendly.

"We hope you will forgive us for intruding upon your thought. It is our—custom—not to communicate unless we are called upon. But when we observed that you were in ignorance of our real—nature—and were about to leave our planet, we decided to put aside our custom, so that you might base your decision upon sufficient data."

Steffens replied haltingly that he appreciated their action.

"We perceive," the robot went on, "that you are unaware of our complete access to your mind, and would perhaps be—dismayed—to learn that we have been gathering information from you. We must—apologize. Our only purpose was so that we could communicate with you. Only that information was taken which is necessary for communication and—understanding. We will enter your minds henceforth only at your request."

Steffens did not react to the news that his mind was being probed as violently as he might have. Nevertheless it was a shock, and he retreated into observant silence as the Aliencon men went to work.

The robot which seemed to have been doing the speaking was in no way different from any of the others in the group. Since each of the robots was immediately aware of all that was being said or thought, Steffens guessed that they had sent one forward just for appearance's sake, because they perceived that the Earthmen would feel more at home. The picture of the extended hand, the characteristic handshake of Earthmen, had probably been borrowed, too, for the same purpose of making him and the others feel at ease. The one jarring note was the robot's momentary lapse, those unexplainable few seconds when the things had seemed almost disappointed. Steffens gave up wondering about that and began to examine the first robot in detail.

It was not very tall, being at least a foot shorter than the Earthmen. The most peculiar thing about it, except for the circling eye-band of the head, was a mass of symbols which were apparently engraved upon the metal chest. Symbols in row upon row—numbers, perhaps—were upon the chest, and repeated again below the level of the arms, and continued in orderly rows across the front of the robot, all the way down to the base of the trunk. If they were numbers, Steffens thought, then it was a

remarkably complicated system. But he noticed the same pattern on the nearer robots, all apparently identical. He was forced to conclude that the symbols were merely decoration and let it go tentatively at that, although the answer seemed illogical.

It wasn't until he was on his way home that Steffens remembered the symbols again. And only then did he realize what they were.

AFTER a while, convinced that there was no danger, Steffens had the ship brought down. When the crew came out of the airlock, they were met by the robots, and each man found himself with a robot at his side, humbly requesting to be of service. There were literally thousands of the robots now, come from all over the barren horizon. The mass of them stood apart, immobile on a plain near the ship, glinting in the sun like a vast, metallic field of black wheat.

The robots had obviously been built to serve. Steffens began to *feel* their pleasure, to sense it in spite of the blank, expressionless faces. They were almost like children in their eagerness, yet they were still reserved. Whoever had built them, Steffens thought in wonder, had built them well.

Ball came to join Steffens, star-

ing at the robots through the clear plastic of his helmet with baffledly widened eyes. A robot moved out from the mass in the field, allied itself to him. The first to speak had remained with Steffens.

Realizing that the robot could hear every word he was saying, Ball was for a while apprehensive. But the sheer unreality of standing and talking with a multi-limbed, intelligent hunk of dead metal upon the bare rock of a dead, ancient world, the unreality of it slowly died. It was impossible not to like the things. There was something in their very lines which was pleasant and relaxing.

Their builders, Steffens thought, had probably thought of that, too.

"There's no harm in them," said Ball at last, openly, not minding if the robots heard. "They seem actually glad we're here. My God, whoever heard of a robot being glad?"

Steffens, embarrassed, spoke quickly to the nearest mechanical: "I hope you will forgive us our curiosity, but—yours is a remarkable race. We have never before made contact with a race like yours." It was said haltingly, but it was the best he could do.

The robot made a singularly human nodding motion of its head.

"I perceive that the nature of our construction is unfamiliar to you. Your question is whether or not we are entirely 'mechanical.' I am not exactly certain as to what the word 'mechanical' is intended to convey — I would have to examine your thought more fully—but I believe that there is fundamental similarity between our structures."

The robot paused. Steffens had a distinct impression that it was disconcerted.

"I must tell you," the thing went on, "that we ourselves are—curious." It stopped suddenly, struggling with a word it could not comprehend. Steffens waited, listening with absolute interest. It said at length:

"We know of only two types of living structure. Ours, which is largely metallic, and that of the *Makers*, which would appear to be somewhat more like yours. I am not a—doctor—and therefore cannot acquaint you with the specific details of the *Makers'* composition, but if you are interested I will have a doctor brought forward. It will be glad to be of assistance."

It was Steffens' turn to struggle, and the robot waited patiently while Ball and the second robot looked on in silence. The *Makers*, obviously, were whoever or whatever had built the robots, and the "doctors," Steffens de-

cided, were probably just that—doctor-robots, designed specifically to care for the apparently flesh-bodies of the Makers.

The efficiency of the things continued to amaze him, but the question he had been waiting to ask came out now with a rush:

"Can you tell us where the Makers are?"

Both robots stood motionless. It occurred to Steffens that he couldn't really be sure which was speaking. The voice that came to him spoke with difficulty.

"The Makers—are not here."

Steffens stared in puzzlement. The robot detected his confusion and went on:

"The Makers have gone away. They have been gone for a very long time."

Could that be pain in its voice, Steffens wondered, and then the spectre of the ruined cities rose harsh in his mind.

War. The Makers had all been killed in that war. And these had not been killed.

He tried to grasp it, but he couldn't. There were robots here in the midst of a radiation so lethal that *nothing*, *nothing* could live; robots on a dead planet, living in an atmosphere of carbon dioxide.

The carbon dioxide brought him up sharp.

If there had been life here once, there would have been plant life

as well, and therefore oxygen. If the war had been so long ago that the free oxygen had since gone out of the atmosphere—good God, how old were the robots? Steffens looked at Ball, then at the silent robots, then out across the field to where the rest of them stood. The black wheat. Steffens felt a deep chill.

Were they immortal?

"**W**OULD you like to see a doctor?"

Steffens jumped at the familiar words, then realized to what the robot was referring.

"No, not yet," he said, "thank you." He swallowed hard as the robots continued waiting patiently.

"Could you tell me," he said at last, "how old you are? Individually?"

"By your reckoning," said his robot, and paused to make the calculation, "I am forty-four years, seven months, and eighteen days of age, with ten years and approximately nine months yet to be alive."

Steffens tried to understand that.

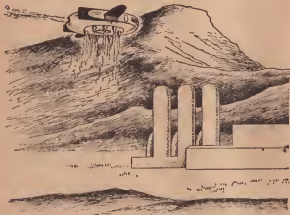
"It would perhaps simplify our conversations," said the robot, "if you were to refer to me by a name, as is your custom. Using the first—letters—of my designation, my name would translate as Elib."

"Glad to meet you," Steffens mumbled.

"You are called 'Stef,'" said the robot obligingly. Then it added, pointing an arm at the robot near Ball: "The age of— Peb — is seventeen years, one month and four days. Peb has therefore remaining some thirty-eight years."

Steffens was trying to keep up. Then the life span was obviously about fifty-five years. But the cities, and the carbon dioxide? The robot, Elb, had said that the Makers were similar to him, and therefore oxygen and plant life would have been needed. Unless—

He remembered the buildings on Tyban IV.



Unless the Makers had not come from this planet at all.

His mind helplessly began to revolve. It was Ball who restored order.

"Do you build yourselves?" the exec asked.

Feb answered quickly, that faint note of happiness again apparent, as if the robot was glad

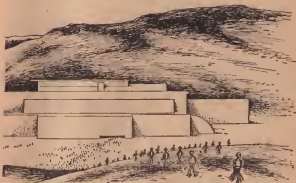
for the opportunity of answering.

"No, we do not build ourselves. We are made by the—" another pause for a word—"by the *Factory*."

"The Factory?"

"Yea. It was built by the Makers. Would you care to see it?"

Both of the Earthmen nodded dumbly.



"Would you prefer to use your—skiff? It is quite a long way from here."

It was indeed a long way, even by skiff. Some of the Aliencon crew went along with them. And near the edge of the twilight zone, on the other side of the world, they saw the Factory outlined in the dim light of dusk. A huge, fantastic block, wrought of gray and cloudy metal, lay in a valley between two worn mountains. Steffens went down low, circling in the skiff, stared in awe at the size of the building. Robots moved outside the thing, little black bugs in the distance—moving around their birthplace.

THE Earthmen remained for several weeks. During that time, Steffens was usually with Elb, talking now as often as he listened, and the Aliencon team roamed the planet freely, investigating what was certainly the strangest culture in history. There was still the mystery of those buildings on Tyban IV; that, as well as the robots' origin, would have to be cleared up before they could leave.

Surprisingly, Steffens did not think about the future. Whenever he came near a robot, he sensed such a general, comfortable air of good feeling that it warmed him, and he was so preoccupied with watching the ro-

bots that he did little thinking.

Something he had not realized at the beginning was that he was as unusual to the robots as they were to him. It came to him with a great shock that not one of the robots had ever seen a living thing. Not a bug, a worm, a leaf. They did not know what flesh was. Only the doctors knew that, and none of them could readily understand what was meant by the words "organic matter." It had taken them some time to recognize that the Earthmen wore suits which were not parts of their bodies, and it was even more difficult for them to understand why the suits were needed.

But when they did understand, the robots did a surprising thing.

At first, because of the excessive radiation, none of the Earthmen could remain outside the ship for long, even in radiation suits. And one morning, when Steffens came out of the ship, it was to discover that hundreds of the robots, working through the night, had effectively decontaminated the entire area.

It was at this point that Steffens asked how many robots there were. He learned to his amazement that there were more than nine million. The great mass of them had politely remained a great distance from the ship, spread out over the planet, since they were highly radioactive.

Steffens, meanwhile, courteously allowed Elb to probe into his mind. The robot extracted all the knowledge of matter that Steffens held, pondered over the knowledge and tried to digest it, and passed it on to the other robots. Steffens, in turn, had a difficult time picturing the mind of a thing that had never known life.

He had a vague idea of the robot's history—more, perhaps, than they knew themselves—but he refrained from forming an opinion until Aliencon made its report. What fascinated him was Elb's amazing philosophy, the only outlook, really, that the robot could have had.

"WHAT do you do?" Steffens asked.

Elb replied quickly, with characteristic simplicity: "We can do very little. A certain amount of physical knowledge was imparted to us at birth by the Makers. We spend the main part of our time expanding that knowledge wherever possible. We have made some progress in the natural sciences, and some in mathematics. Our purpose in being, you see, is to serve the Makers. Any ability we can acquire will make us that much more fit to serve when the Makers return."

"When they return?" It had not occurred to Steffens until

now that the robots expected the Makers to do so.

Elb regarded him out of the band of the circling eye. "I see you had surmised that the Makers were not coming back."

If the robot could have laughed, Steffens thought it would have, then. But it just stood there, motionless, its tone politely emphatic.

"It has always been our belief that the Makers would return. Why else would we have been built?"

Steffens thought the robot would go on, but it didn't. The question, to Elb, was no question at all.

Although Steffens knew already what the robot could not possibly have known—that the Makers were gone and would never come back—he was a long time understanding. What he did was push this speculation into the back of his mind, to keep it from Elb. He had no desire to destroy a faith.

But it created a problem in him. He had begun to picture for Elb the structure of human society, and the robot—a machine which did not eat or sleep—listened gravely and tried to understand. One day Steffens mentioned God.

"God?" the robot repeated, without comprehension. "What is God?"

Steffens explained briefly, and the robot answered:

"It is a matter which has troubled us. We thought at first that you were the Makers returning—" Steffens remembered the brief paper, the seeming disappointment he had sensed—"but then we probed your minds and found, that you were not, that you were another kind of being, unlike either the Makers or ourselves. You were not even—" Elb caught himself—"you did not happen to be telepaths. Therefore we troubled over who made you. We did detect the word 'Maker' in your theology, but it seemed to have a peculiar—" Elb paused for a long while—"an untouchable, intangible meaning which varies among you."

Steffens understood. He nodded.

The Makers were the robots' God, were all the God they needed. The Makers had built them, the planet, the universe. If he were to ask them who made the Makers, it would be like their asking him who made God.

It was an ironic parallel, and he smiled to himself.

But on that planet, it was the last time he smiled.

THE report from Aliencon was finished at the end of the fifth week. Lieutenant Ball brought it in to Steffens in his cabin, laid

it on the desk before him.

"Get set," Ball advised stiffly, indicating the paper. There was a strained, brittle expression on his face. "I sort of figured it, but I didn't know it was this bad."

When Steffens looked up in surprise, Ball said:

"You don't know. Read it. Go ahead." The exec turned tautly and left the room.

Steffens stared after him, then looked down at the paper. The hint he had of the robots' history came back into his mind. Nervously, he picked up the report and started to read.

The story unfolded objectively. It was clear and cold, the way formal reports must always be. Yet there was a great deal of emotion in it. Even Aliencon couldn't help that.

"What it told was this:

The Makers had been almost humanoid. Almost, but with certain notable exceptions. They were telepaths—no doubt an important factor in their remarkable technological progress—and were equipped with a secondary pair of arms. The robot-doctors were able to give flawless accounts of their body chemistry, which was similar to Earth-type, and the rubble of the cities had given a certain amount of information concerning their society and habits. An attached paper described the sociology, but Steffens put it

aside until sometime later.

There had been other Factories. The remains of them had been found in several places, on each of the other continents. They had been built sometime prior to the war, and all but one of the Factories had subsequently been destroyed.

Yet the Makers were not, as Steffens had supposed, a warlike people. Telepathy had given them the power to know each others' minds and to interchange ideas, and their record of peace was favorable, especially when compared with Earth's. Nevertheless, a war had begun, for some reason Aliencon could not find, and it had obviously gotten out of hand.

Radiation and bacteria eventually destroyed the Makers; the last abortive efforts created enough radiation to destroy life entirely. There were the germs and the bombs and the burning rays, and in the end everything was blasted and died — everything, that is, but the one lone Factory. By a pure, blind freak, it survived.

And, naturally, it kept turning out robots.

It was powered by an atomic pile, stocked with materials which, when combined with the retuning, worn-out robots, enabled it to keep producing indefinitely. The process, even of repair, was entirely automatic.

Year after year, the robots came out in a slow, steady stream. Ungoverned, uninstructed, they gathered around the Factory and waited, communicated only rarely among themselves. Gradually the memory of war, of life—of everything but that which was imprisoned in their minds at birth—was lost.

The robots kept coming, and they stood outside the Factory.

The robot brain, by far the finest thing the Makers had ever built, was variable. There was never a genius brain, and never a moron brain, yet the intelligence of the robots varied considerably in between. Slowly, over the long years, the more intelligent among them began to communicate with each other, to inquire, and then to move away from the Factory, searching.

They looked for someone to serve and, of course, there was no one. The Makers were gone, but the crime was not in that alone. For when the robots were built, the Makers had done this:

Along with the first successful robot brain, the Makers had realized the necessity of creating a machine which could never turn against them. The present robot brain was the result. As Steffens had already sensed, *the robots could feel pain*. Not the pain of physical injury, for there were no nerves in the metal bodies, but

the pain of frustration, the pressure of thwarted emotion, mental pain.

And so, into the robot brain, the Makers had placed this prime Directive: the robots could only feel content, free from the pain, as long as they were serving the Makers. The robots must act for the Makers, must be continually engaged in carrying out the wishes of the Makers, or else there was a slowly growing irritation, a restlessness and discontent which mounted as the unserving days went by.

And there were no more Makers to serve.

THE pain was not unbearable. The Makers themselves were not fully aware of the potentialities of the robot brain, and therefore did not risk deranging it. So the pressure reached a peak and leveled off, and for all of the days of the robots' lives, they felt it never-ending, awake and aware, each of them, for fifty-five years.

And the robots never stopped coming.

A millenium passed, during which the robots began to move and to think for themselves. Yet it was much longer before they found a way in which to serve.

The atomic pile which powered the Factory, having gone on for almost five thousand years, eventually wore out. The power

ceased. The Factory stopped.

It was the first event in the robots' history. Never before had there been a time when they had known anything at all to alter the course of their lives, except the varying weather and the unvarying pain. There was one among them now that began to reason.

It saw that no more robots were being produced, and although it could not be sure whether or not this was as the Makers had ordained, it formed an idea. If the purpose of the robots was to serve, then they would fail in that purpose if they were to die out. The robot thought this and communicated it to the others, and then, together, they began to rebuild the pile.

It was not difficult. The necessary knowledge was already in their minds, implanted at birth. The significance lay in the fact that, for the first time in their existence, the robots had acted upon their own initiative, had begun to serve again. Thus the pain ceased.

When the pile was finished, the robots felt the return of the pain and, having once begun, they continued to attempt to serve. A great many examined the Factory, found that they were able to improve upon the structure of their bodies, so that they might be better able to serve the Ma-



kers when they returned. Accordingly, they worked in the Factory, perfecting themselves — although they could not improve the brains — and many others left the Factory and began to examine mathematics and the physical universe.

It was not hard for them to build a primitive spaceship, for the Makers had been on the verge of interstellar flight, and they flew it hopefully throughout the solar system, looking to see if the Makers were there. Finding no one, they left the buildings on Tyban IV as a wistful monument, with a hope that the Makers would some day pass this way and be able to use them.

Millenia passed. The pile broke down again, was rebuilt, and so the cycle was repeated. By infinitesimal steps, the robots learned and recorded their learning in the minds of new robots. Eventually they reached the limits of their capability.

The pain returned and never left.

STEFFENS left his desk, went over and leaned against the screen. For a long while he stood gazing through the mists of carbon air at the pitiful, loyal mechanicals who thronged outside the ship. He felt an almost overwhelming desire to break something, anything, but all he could do was swear to himself.

Ball came back, looked at Steffens' eyes and into them. His own were sick.

"Twenty-five thousand years," he said thickly, "that's how long it was. *Twenty - five thousand years . . .*"

Steffens was pale and wordless. The mass of the robots outside stood immobile, ageless among rock which was the same, hurting, hurting. A fragment of an old poem came across Steffens' mind. "They also serve who only stand and wait . . ."

Not since he was very young had he been so deeply moved. He stood up rigidly and began to talk to himself, saying in his mind:

It is all over now. To hell with what is past. We will take them away from this place and let them serve and, by God . . .

He faltered. But the knowledge of what could be done strengthened him. Earthmen would have to come in ships to take the robots away. It would be a little while, but after all those years a little while was nothing, less than nothing. He stood there thinking of the things the robots could do, of how, in the Mapping Command alone, they would be invaluable. Temperature and atmosphere meant nothing to them. They could land on almost any world, could mine and build and develop . . .

And so it would be ended. The robots would serve Man.

Steffens took one long, painful breath. Then he strode from the room without speaking to Ball, went forward to the lockers and pulled out a suit, and a moment later he was in the airlock.

He had one more thing to do, and it would be at once the gladdest and most difficult job that he had ever attempted. He had to tell the robots.

He had to go out into the sand and face them, tell them that all of the centuries of pain had been for nothing, that the Makers were dead and would never return, that every robot built for twenty-five thousand years had been just surplus, purposeless. And yet—and this was how he was able to do it—he was also coming to tell them that the wasted years were over, that the years of doing had begun.

As he stepped from the airlock he saw Elb standing, immobile, waiting by the ship. In the last few seconds Steffens realized that it was not necessary to put this into words.

When he reached the robot, he put forth a hand and touched Elb's arm, and said very softly:

"Elb, my friend, you must look into my mind—"

And the robot, as always, obeyed.

—MICHAEL SHARA

For Your Information

By WILLY LEY



AT the risk of being blamed for inventing a brand-new variety of nepotism, I'm going to begin this column with an answer to a question asked of me by my own eight-year-old daughter. One day, probably thinking back to a

visit to the meteorite collection in the Hayden Planetarium, she asked: "Daddy, has anybody ever been hurt by a meteorite?" I happened to know that this had occurred more than once; naturally, such strange cases were always



recorded, and so I could answer the question in the affirmative.

Let's forget for a moment that there are such cases on record, however, and try to work up the statistical probabilities—instead. We all know that meteorites come in all sizes, from particles—as small as grains of fine sand, making a barely visible streak of light in the night sky, to hefty chunks like Ahnighito from Greenland, which weighs around 35 tons, and the one at Hoba West near Grootfontein in Southwest Africa, which is still in the ground and has been estimated by some to weigh 60 tons. Those which make impressive streaks of light in the sky and can almost be said to illuminate a night landscape momentarily are nevertheless tiny bits of cosmic matter.

A bright meteor with a visual magnitude of “zero”—like a very bright star—is caused by a meteorite with a mass of $\frac{1}{4}$ gram. One with a visual magnitude of “minus three” — a newspaper probably would headline it “blinding meteor flashes across city; harmless, scientists say”—has a mass of 4 grams. And there are 28 grams to the ounce. Meteorites that small never even reach the ground.

The next question in our statistical analysis would be how numerous meteorites are. The best available answer is that, count-

ing only those of visual magnitude “zero” or brighter, there are 450,000 per 24-hour day. Among them there are perhaps half a dozen large enough to reach the ground. Every day, Earth sweeps a small truck-load of fine sand, with a few pebbles in it, out of the sky. If that rate has been maintained for the last two billion years, which is doubtful, this accumulation of cosmic sand has increased Earth's diameter by about half an inch.

All right, then, a few pebbles a day. The area of Earth's surface is 197 million square miles. The oceans cover 140 million square miles and, as far as the endangered population is concerned, you can subtract another half million square miles for the combined area of all lakes and another 6 million square miles for Antarctica, where nobody lives. This leaves 50 million square miles of area where somebody might be hit: in round figures, one-quarter of the total surface.

If eight meteorites per 24-hour day are large enough to reach the ground, just two of them will hit inhabited or inhabitable land. You don't have to go on and establish the average number of people per square mile and the percentage of a square mile covered by the area of the average number of inhabitants. From

statistics alone, you'd learn that it is virtually impossible for a person to be the accidental target of a meteorite.

The actual historical records tell a different tale. What may be taken as the oldest reported case is the one in the Bible (Joshua 10:11) "... as they fled from before Israel, and were in the going down to Beth-horon, that the Lord cast down great stones from heaven upon them unto Azakah, and they died. . . ." The date, roughly, would be 1500 B. C. Of the meteorites mentioned in classical literature, only one is considered as "certain," a "stone the size of a chariot" which fell on the Greek mainland—in Thrace—in 476 B. C. It was described by Pliny the Elder and was still extant in his time, but if it did any damage, that fact was not recorded. The second case of fatalities due to meteorites was located by the French scientist Biot almost a hundred and fifty years ago. In January, 616 A.D., according to Chinese chronicles, a large stone fell in China, crushing wagons and killing ten men.

The next case is the most famous one for more than a few reasons. It happened in Crema, a city near Milan in Italy. It took place, by a strange coincidence, during an eclipse of the Sun. And Raffaele Santi, or Raphael, painted the event. The date

was the 14th of September, 1511, and it must have been a large meteorite which entered the Earth's atmosphere and exploded. About a thousand stones pelted the area, killed birds and sheep and a Franciscan friar.

In 1569—oddly enough, also on September 14—several meteorites struck Venice, causing damage to buildings, but no loss of life. In 1650, on September 4th, a small stone descended on the grounds of a Franciscan monastery in Milan, killing one of the monks. In 1654, a sailing ship returned to the Mediterranean from Japan and the captain reported that during the voyage, which lasted a number of years, a meteorite weighing some nine pounds had hit the bridge, killing two sailors.

The more recent the reports, the more specific they are in detail. Lincoln LaPaz of the Institute of Meteorites (U. of New Mexico) recently compiled a list containing the following cases:

- 1794, June 16, 7:00 PM: fall of chondrites (stony meteorites) at Siena, Italy; one stone pierced the hat of a child, no injuries
- 1825, January 16: meteorite fall at Oriang (India) killed a man and seriously injured a woman
- 1827, February 16, 3:30 PM: meteorite fall at Mhow (India) wounded a man in one arm
- 1838, November 11, 5:30 AM: several cattle killed by fall of stony meteorites at Macao, Brazil
- 1847, July 14, 3:45 AM: fall at Braunau, Austria, mass weighing $37\frac{1}{2}$

lbs. fell into a room with three sleeping children, covered them with debris without doing other harm.
 1860, May 1, 12:45 PM: colt killed at New Concord, Ohio
 1876, January 13, 7:00 PM: a man was very narrowly missed by a meteorite at Nedagolla, India
 1911, June 28, 9:00 AM: a dog was killed at Nakatia, Egypt
 1927, April 28, 9:00 AM: at Aka, Japan, a meteorite (preserved, weighing only 0.9 grams) struck and slightly injured the five-year old daughter of Mr. Tahai Kuriyama
 1938, June 24, 6:03 PM: at Chicora, Pennsylvania, a cow was found with its hide torn as if by a falling stone. This was immediately after a recognized meteorite fall; meteorites were found in neighboring fields.

To this list compiled by Prof. LaPar, two cases can be added, one of them doubtful. The doubtful case occurred in 1915 in northern Germany (Pomerania or Mecklenburg), where several sheep burned to death in a fire in a hayloft alleged to have been caused by a meteorite. To the best of my knowledge, the meteorite was never found.

The other case is the so-called Benld Meteorite to which the Chicago Natural History Museum has just devoted a special paper (Geological Series, vol. vii, No. 11.) It fell on September 29, 1938, between 9:00 and 9:10 AM at Benld, Macoupin County, Illinois. It was a rather large chondrite, weighing 1770.5 grams or 3.9 lbs. The Benld meteorite did not injure anybody, but broke

through the roof of a garage, the roof of the car parked inside, through the seat cushion and the car's floor. It struck the muffler next, denting it and then bounced back to come to rest entangled in the seat springs.

Against all statistical probability, then, meteorites have hit and killed people. But it may be generations between now and the next instance.

VISITORS to a planetarium often ask whether it is possible to produce a picture of the sky in, say, 2352 A.D. or of the time of Shalmaneser I of Assyria, who began his rule probably in 1276 B.C. Of course, that can be done: in December of every year, most planetariums set their instrument back to the time of Christ. (The director usually winces a bit when December rolls around, for that needs some 20 hours running time, which wears out cog wheels and is hard on the bearings.)

But when you go back to 2000 B.C., you have to be several hours off if you want to reproduce a specific time—say, midnight. The instrument is not corrected for the fact that the length of the day changes slightly. The best present estimate is that the day lengthens at the rate of 0.001 seconds per century. Over an interval of 4000 years, that makes the

day of Shalmaneser's time 0.04 seconds shorter than it is now. Hardly noticeable — but 4000 years contain about 1,400,000 days. The average discrepancy for every day would thus be 0.002 seconds, which totals up to 28,000 seconds, or eight hours.

This, according to Prof. George Gamow, is the reason why the ancients observed eclipses which, if calculated without that correction factor, should have been below the horizon for them.

LET'S talk about a yard of string now, to give a wonderful example of how "reasoning" can lead you astray. The circumference of the Earth along the equator is 24,902 miles or, since there are 1760 yards in a mile, 43,827,520 yards. Now we'll level all the mountains that happen to be along the equator and put a string around, at sea level, tight. And now we lengthen this string by precisely one yard. How high, provided that it is supported all around the equator at the same distance, would that string be above sea level?

"Reasoning" will say, without a moment's hesitation, that it will be insignificant. Possibly a bacillus, if it really wanted to, could squeeze across the equator under that string. The truth is that a cat could do it, for the string would be about six inches above

the ground.

Impossible? Let's see what the radius of the larger circle would be—we are all agreed that it must be larger; being one yard longer, the question is merely whether it would be visible. The original sea level circle was given by $2\pi \times r$, the new circle is obviously $2\pi \times r + 1$ (if "r" has been expressed in yards) and the new radius R must be $r + x$. And x turns out to be 1 divided by 2π . If we take π as 3.1415, this gives 0.1592 of a yard, or 5.8 inches.

The point is here that the increase of the radius is independent of the original radius. The increase of the radius must always be equal to the increase in the circumference divided by 2π .

Go ahead and try it with anything circular you have access to. You'll always find that an increase of the original circumference by one yard will increase the radius by slightly less than six inches.

In case neither the formula nor the experiments fully convince you, you may imagine another example which might help. Here we have a board three yards long—but we imagine it to be so thin that its thickness is negligible—and we tie a string around lengthwise. Obviously the string will be six yards long.

Now we lengthen the string

once more by one yard. The result will be two loops at both ends, each loop sticking out by one quarter of a yard or 9 inches. Here it is apparent that it would not matter whether the board is originally three yards long, or 100 yards, or 77 miles. If you add a yard to the length of the tight string, you'll always get two loops at both ends, sticking out a full nine inches.

Common sense, as you can see, is not always common, which has been noted by others in the past—but neither does it always make sense!

—WHILY LEY

ANY QUESTIONS?

A handbook stated the temperature of the high atmosphere as 2500° Kelvin for an altitude of 650 kilometers and continues: "this would make space flight virtually impossible; this temperature is well above the melting point of most metals and above the vaporization point of many."

*Richard Hanna,
83 Edgewood St.
Hartford, Conn.*

These figures have proved enormously misleading to many people—they don't mean at all what they seem to mean. You know that the speed of air molecules increases with temperature, so you could express a

given temperature by mentioning the average speed of the air molecules. Conversely, you can express the average speed of air molecules by temperature. This is what such tables usually do, and some physicists are careful to refer to them as "kinetic temperatures." But the kinetic temperature of 2500° Kelvin at 650 Kilometers altitude does not mean that a rocket would acquire that temperature up there. The "kinetic temperature" merely states how fast the air molecules move; it says nothing about whether there are enough air molecules up there to matter. There aren't.

For rockets large enough to have the payload capacity to carry a pilot, air resistance virtually ceases as low as 20 miles above sea level. Beyond that, the air is too thin to influence either the movement or the temperature of a rocket.

If interstellar space is a vacuum, with neither matter nor gas present, it is therefore "nothing." What are the physical components of "nothing?"

Dorothy Urman

*2652 Euclid Heights Boulevard
Cleveland Heights 6, Ohio*

Even if interstellar space were completely empty, it would still not be "nothing."

It may have nothing in it, but it is space, something where matter might be. Actually, interstellar space is not empty, for it is still filled with radiation. The most typical (and only) characteristic of empty space I can think of is that it does not offer any resistance to movement, either of material objects or of radiant energy.

What are the chances of finding planets (or intelligent life on them) circling other stars?

Eddie West, Jr.

2025 North Flower Street,
Santa Ana, Cal.

Excellent—except that we don't know yet how we could get there. Here's the reason why life elsewhere is virtually certain:

In our own galaxy, there are at least 15 billion suns. If we consider only those of the Main Sequence (to which our sun and Sirius belong), we deal with something like 10 billion stars. If only a tenth of them have planets—a rather pessimistic assumption—we get one billion suns with planets. If our solar system is representative, that would make two billion planets like Earth and Mars. Assuming that only one per cent of these planets have produced intelligent life, we get 20 million planets with intelligent beings

on them. And if only one per cent of those have progressed to the verge of space travel, as we have, we can count on two hundred thousand planets where beings are writing equations about rockets and mass ratios and most likely read and write science fiction.

Considerable, eh?

I would like to have your opinion on life not based on carbon like ours. Most authorities are extremely pessimistic, so it would be interesting to hear the other side (providing that there is an "other side"). Also, could you give me references regarding contra-terrene matter?

Robert O. Woods

1836 Pennington Road
Trenton, N. J.

I'm afraid there is no "other side." Within the temperature range in which we know chemistry best, only the carbon atom is versatile enough to form living compounds. Whether this may be different in another temperature range is simply beyond our knowledge.

For contra-terrene matter, see: *Astrophysical Journal*, March 1940, pp. 257-260 (Rojanski); *Physical Review* 1935, p. 108 (Rojanski), *ibid.* 1935, p. 169 (Zwieky); *Pop. Astronomy* February 1941, pp. 99-104, *ibid.* May 1941, pp. 265-

267, *ibid.* June 1948, (Herrick, La Paz et al.); George Gamow: *Structure of Atomic Nuclei* (Oxford 1937) Part I, Chapter 5; P.A.M. Dirac in Heisenberg's *Die moderne Atomtheorie*, Leipzig 1934, p. 45ff.

Is there any material known (with the exception of large chunks of space itself) which will insulate a piece of iron from the attraction of a magnet?

Betsy Curtis

R.D. 2

Saegertown, Penn.

There is no insulator known. For practical purposes, one can use a shield of Permalloy or Mu-metal (both highly magnetic) which will bunch up the magnetic lines within themselves so that the lines don't pass through. By analogy with electricity, this would be a short circuit rather than an insulator.

I have read that in some parts of the Milky Way there are interstellar wisps of gas, mostly hydrogen. Why doesn't this gas diffuse in the vacuum of interstellar space?

Is the mention of the planet Vulcan—supposed to be inside the orbit of Mercury—in a few science fiction stories based on any factual evidence?

Joseph Russo

1941 62nd Street

Brooklyn 4, N. Y.

The wisps of gas would diffuse into space if they were warm enough. Some of them are definitely black and visible only because they obscure portions of the Milky Way; others which are luminous do not glow with heat. In short, they are cold enough so that the mutual attraction of their particles holds them together.

As for the planet Vulcan inside the orbit of Mercury, astronomical circles believed in its existence for some three-quarters of a century. It was assumed to exist because the orbit of Mercury seemed to require another planet nearer the Sun. Observers, both professional astronomers and amateurs, set out to watch for it, especially at the occasion of solar eclipses.

One observer (a German living in China) thought he had seen Vulcan pass across the disk of the Sun. But the Observatory in Madrid, having bigger instruments, recognized it as a roughly circular sunspot. Two observers (one American, one Englishman) thought they had discovered it during an eclipse, but it turned out to be a small reddish fixed star that happened to be in line of sight. A French country doctor named Lescarbault actually received

the *légion d'honneur* for "the discovery of Vulcan" in March 1859. He had "seen" it cross the disk of the Sun.

But if Vulcan really existed, we should have found it by now. What Lescaurhault actually saw was probably one of the planetoids which approach the Sun more closely than the Earth on occasion. Since the existence of these planetoids was not known then, and since Vulcan was on the list of things to be found, his mistake is easily explained.

Ronald Demovsky (no address given) wonders about the statement in my first column where I said that J-IV (Callisto) has been seen "perfectly black," since a "perfectly black" body would be invisible. Or did I mean that J-IV was in Jupiter's shadow?

I did not mean the term "perfectly black" quite so rigorously. But even a perfectly black body can be seen—against a lighter background. This, of course, is what the observers meant; they referred to

a transit, not to an eclipse.

In your book Rockets, Missiles and Space Travel, you state that the condition of apparent weightlessness occurs only rarely and for very short periods.

I would like to know just when it takes place.

S. Petinga

*4129 Winchester Avenue
Atlantic City, N. J.*

It takes place when man is falling freely; for example, when jumping from a diving board, and during the early stages of a parachute jump before the parachute is opened, when air resistance has not yet slowed the person down. One other possibility is a carefully controlled power dive where the plane develops just enough power to overcome air resistance. Since this may prolong the state of weightlessness for many minutes, Dr. Hafer of the USAF Department of Space Medicine has suggested using such controlled power dives for the study of the problem.

More on "Homeless Facts"

Every scientist is aware that there are facts and observations that cannot be reported through fear of ridicule, loss of professional standing, even outright dismissal. In the April 1952 issue, *GALAXY* offered to serve as a clearing house for those unreportable facts.

The response has been stimulating, in some cases actually startling. After they have been verified, you will see some of this previously withheld data in future issues.

If you have any such facts that should be made available to research, send them to *GALAXY*. They'll be treated soberly, carefully, every effort made to investigate . . . and your name will be held in strictest confidence, if you choose.

*if Ollie knew the work he was
doing, he would have resigned
— if resigning were possible!*

Shipping Clerk

By WILLIAM MORRISON

IF there had ever been a time when Ollie Keith hadn't been hungry, it was so far in the past that he couldn't remember it. He was hungry now as he walked through the alley, his eyes shifting listlessly from one heap of rubbish to the next. He was hungry through and through, all one hundred and forty pounds of him, the flesh distributed so gauntly over his tall frame that in spots it seemed about to wear through, as his clothes had. That it hadn't done so in forty-two

years sometimes struck Ollie as in the nature of a miracle.

He worked for a junk collector and he was unsuccessful in his present job, as he had been at everything else. Ollie had followed the first part of the rags-to-riches formula with classic exactness. He had been born to rags, and then, as if that hadn't been enough, his parents had died, and he had been left an orphan. He should have gone to the big city, found a job in the rich merchant's counting house,

Illustrated by EMNH

and saved the pretty daughter, acquiring her and her fortune in the process.

It hadn't worked out that way. In the orphanage where he had spent so many unhappy years, both his food and his education had been skimped. He had later been hired out to a farmer, but he hadn't been strong enough for farm labor, and he had been sent back.

His life since then had followed an unhappy pattern. Lacking strength and skill, he had been unable to find and hold a good job. Without a good job, he had been unable to pay for the food and medical care, and for the training he would have needed to acquire strength and skill. Once, in the search for food and training, he had offered himself to the Army, but the doctors who examined him had quickly turned thumbs down, and the Army had rejected him with contempt. They wanted better human material than that.

How he had managed to survive at all to the present was another miracle. By this time, of course, he knew, as the radio comic put it, that he wasn't long for this world. And to make the passage to another world even easier, he had taken to drink. Rot gut stilled the pangs of hunger even more effectively than inadequate food did. And it gave

him the first moments of happiness, spurious though they were, that he could remember.

Now, as he sought through the heaps of rubbish for usable rags or redeemable milk bottles, his eyes lighted on something unexpected. Right at the edge of the curb lay a small nut, species indeterminate. If he had his usual luck, it would turn out to be withered inside, but at least he could hope for the best.

HE picked up the nut, banged it futilely against the ground, and then looked around for a rock with which to crack it. None was in sight. Rather fearfully, he put it in his mouth and tried to crack it between his teeth. His teeth were in as poor condition as the rest of him, and the chances were that they would crack before the nut did.

The nut slipped and Ollie gurgled, threw his hands into the air and almost choked. Then he got it out of his windpipe and, a second later, breathed easily. The nut was in his stomach, still uncracked. And Ollie, it seemed to him, was hungrier than ever.

The alley was a failure. His life had been a progression from rags to rags, and these last rags were inferior to the first. There were no milk bottles, there was no junk worth salvaging.

At the end of the alley was a

barber shop, and here Ollie had a great and unexpected stroke of luck. He found a bottle. The bottle was no container for milk and it wasn't empty. It was standing on a small table near an open window in the rear of the barber shop. Ollie found that he could get it by simply stretching out his long, gaunt arm for it, without climbing in through the window at all.

He took a long swig, and then another. The liquor tasted far better than anything he had ever bought.

When he returned the bottle to its place, it was empty.

Strangely enough, despite its excellent quality, or perhaps, he thought, because of it, the whiskey failed to have its usual effect on him. It left him completely sober and clear-eyed, but hungrier than ever.

In his desperation, Ollie did something that he seldom dared to do. He went into a restaurant, not too good a restaurant or he would never have been allowed to take a seat, and ordered a meal he couldn't pay for.

He knew what would happen, of course, after he had eaten. He would put on an act about having lost his money, but that wouldn't fool the manager for more than one second. If the man was feeling good and needed help, he'd let Ollie work the price

out washing dishes. If he was a little grumpy and had all the dishwashers he needed, he'd have them boot the tar out of Ollie and then turn him over to the police.

The soup was thick and tasty, although tasty in a way that no gourmet would have appreciated. The mess was food, however, and Ollie gulped it down gratefully. But it did nothing to satisfy his hunger. Likewise, the stew had every possible leftover thrown into it, and none of it gave Ollie any feeling of satisfaction. Even the dessert and the muddy coffee left him as empty as before.

The waiter had been in the back room with the cook. Now Ollie saw him signal to the manager, and watched the manager hasten back. He closed his eyes. They were onto him; there was no doubt about it. For a moment he considered trying to get out of the front door before they closed in, but there was another waiter present, keeping an eye on the patrons, and he knew that he would never make it. He took a deep breath and waited for the roof to fall in on him.

He heard the manager's footsteps and opened his eyes. The manager said, "Uh—look, bud, about that meal you ate—"

"Not bad," observed Ollie brightly.

"Glad you liked it."

He noticed little beads of sweat on the manager's forehead, and wondered what had put them there. He said, "Only trouble is, it ain't fillin'. I'm just as hungry as I was before."

"It didn't fill you up, huh? That's too bad. I'll tell you what I'll do. Rather than see you go away dissatisfied, I won't charge you for the meal. Not a cent."

Ollie blinked. This made no sense whatever. All the same, if not for the gnawing in his stomach, he would have picked himself up and run. As it was, he said, "Thanks. Guess in that case I'll have another order of stew. Maybe this time it'll stick to my ribs."

"Not the stew," replied the manager nervously. "You had the last that was left. Try the roast beef."

"Humm, that's more than I was gonna spend."

"No charge," said the manager. "For you, no charge at all."

"Then gimme a double order. I feel starved."

The double order went down the hatch, yet Ollie felt just as empty as ever. But he was afraid to press his luck too far, and after he had downed one more dessert—also without charge—he reluctantly picked himself up and walked out. He was too hungry to spend any more time wondering why he had got a free meal.

In the back room of the restaurant, the manager sank weakly into a chair. "I was afraid he was going to insist on paying for it. Then we'd really have been on a spot."

"Guess he was too glad to get it for free," the cook said.

"Well, if anything happens to him now, it'll happen away from here."

"Suppose they take a look at what's in his stomach."

"He still won't be able to sue us. What did you do with the rest of that stew?"

"It's in the garbage."

"Cover it up. We don't want dead cats and dogs all over the place. And next time you reach for the salt, make sure there isn't an insect powder label on it."

"It was an accident; it could happen to anybody," said the cook philosophically. "You know, maybe we shouldn't have let that guy go away. Maybe we ought to have sent him to a doctor."

"And pay his bills? Don't be a sap. From now on, he's on his own. Whatever happens to him, we don't know anything about it. We never saw him before."

THE only thing that was happening to Ollie was that he was getting hungrier and hungrier. He had, in fact, never before been so ravenous. He felt as if he hadn't eaten in years.

He had met with two strokes of luck—the accessible bottle and the incredibly generous manager. They had left him just as hungry and thirsty as before. Now he encountered a third gift of fortune. On the plate glass window of a restaurant was the flamboyant announcement: EATING CONTEST TONIGHT AT MONTE'S RESTAURANT! FOR THE CHAMPIONSHIP OF THE WORLD! ENTRIES BEING TAKEN NOW! NO CHARGE IF YOU EAT ENOUGH FOR AT LEAST THREE PEOPLE.

Ollie's face brightened. The way he felt, he could have eaten enough for a hundred. The fact that the contestants, as he saw upon reading further, would be limited to hard-boiled eggs made no difference to him. For once he would have a chance to eat everything he could get down his yawning gullet.

That night it was clear that neither the judges nor the audience thought much of Ollie as an eater. Hungry he undoubtedly was, but it was obvious that his stomach had shrunk from years of disuse, and besides, he didn't have the build of a born eater. He was long and skinny, whereas the other contestants seemed almost as broad and wide as they were tall. In gaining weight, as in so many other things, the motto seemed to be that those who already had would get more.

Ollie had too little to start with.

In order to keep the contest from developing an anticlimax, they started with Ollie, believing that he would be lucky if he ate ten eggs.

Ollie was so ravenous that he found it difficult to control himself, and he made a bad impression by gulping the first egg as fast as he could. A real eater would have let the egg slide down rapidly yet gently, without making an obvious effort. This uncontrolled, amateur speed, thought the judges, could only lead to a stomachache.

Ollie devoured the second egg, the third, the fourth, and the rest of his allotted ten. At that point, one of the judges asked, "How do you feel?"

"Hungry."

"Stomach hurt?"

"Only from hunger. It feels like it got nothin' in it. Somehow, them eggs don't fill me up."

Somebody in the audience laughed. The judges exchanged glances and ordered more eggs brought on. From the crowd of watchers, cries of encouragement came to Ollie. At this stage, there was still nobody who thought that he had a chance.

Ollie proceeded to go through twenty eggs, forty, sixty, a hundred. By that time, the judges and the crowd were in a state of unprecedented excitement.

Again a judge demanded, "How do you feel?"

"Still hungry. They don't fill me up at all."

"But those are large eggs. Do you know how much a hundred of them weigh? Over fifteen pounds!"

"I don't care how much they weigh. I'm still hungry."

"Do you mind if we weigh you?"

"So long as you don't stop givin' me eggs, okay."

They brought out a scale and Ollie stepped on it. He weighed one hundred and thirty-nine pounds, on the nose.

Then he started eating eggs again. At the end of his second hundred, they weighed him once more. Ollie weighed one hundred thirty-eight and three-quarters.

The judges stared at each other and then at Ollie. For a moment the entire audience sat in awed silence, as if watching a miracle. Then the mood of awe passed.

One of the judges said wisely, "He palms them and slips them to a confederate."

"Out here on the stage?" demanded another judge. "Where's his confederate? Besides, you can see for yourself that he eats them. You can watch them going down his throat."

"But that's impossible. If they really went down his throat, he'd gain weight."

"I don't know how he does it," admitted the other. "But he does."

"The man is a freak. Let's get some doctors over here."

Ollie ate another hundred and forty-three eggs, and then had to stop because the restaurant ran out of them. The other contestants never even had a chance to get started.

WHEN the doctor came and they told him the story, his first impulse seemed to be to grin. He knew a practical joke when he heard one. But they put Ollie on the scales—by this time he weighed only a hundred thirty-eight and a quarter pounds—and fed him a two pound loaf of bread. Then they weighed him again.

He was an even one hundred and thirty-eight.

"At this rate, he'll starve to death," said the doctor, who opened his little black bag and proceeded to give Ollie a thorough examination.

Ollie was very unhappy about it because it interfered with his eating, and he felt more hungry than ever. But they promised to feed him afterward and, more or less unwillingly, he submitted.

"Bad teeth, enlarged heart, lesion on each lung, flat feet, hernia, displaced vertebrae—you name it and he has it," said the doctor.

"Where the devil did he come from?"

Ollie was working on an order of roast beef and was too busy to reply.

Somebody said, "He's a rag-picker. I've seen him around."

"When did he start this eating spree?"

With stuffed mouth, Ollie mumbled, "Today."

"Today, eh? What happened today that makes you able to eat so much?"

"I just feel hungry."

"I can see that. Look, how about going over to the hospital so we can really examine you?"

"No, sir," said Ollie. "You gin't pokin' no needles into me."

"No needles," agreed the doctor hastily. If there was no other way to get blood samples, they could always drug him with morphine and he'd never know what had happened. "We'll just look at you. And we'll feed you all you can eat."

"All I can eat? It's a deal!"

THE humor was crude, but it put the point across—the photographer assigned to the contest had snapped a picture of Ollie in the middle of gulping two eggs. One was traveling down his gullet, causing a lump in his throat, and the other was being stuffed into his mouth at the same time. The caption writer had entitled

the shot: THE MAN WHO BROKE THE ICEBOX AT MONTE'S, and the column alongside was headed, Eats Three Hundred and Forty-three Eggs. "I'm Hungry!" He Says.

Zolto put the paper down. "This is the one," he said to his wife. "There can be no doubt that this person has found it."

"I knew it was no longer in the alley," said Pojim. Ordinarily a comely female, she was now deep in thought, and succeeded in looking beautiful and pensive at the same time. "How are we to get it back without exciting unwelcome attention?"

"Frankly," said Zolto, "I don't know. But we'd better think of a way. He must have mistaken it for a nut and swallowed it. Undoubtedly the hospital attendants will take X-rays of him and discover it."

"They won't know what it is."

"They will operate to remove it, and then they will find out."

Pojim nodded. "What I don't understand," she said, "is why it had this effect. When we lost it, it was locked."

"He must have opened it by accident. Some of these creatures, I have noticed, have a habit of trying to crack nuts with their teeth. He must have bitten on the proper switch."

"The one for inanimate matter? I think, Zolto, that you're

right. The stomach contents are collapsed and passed into our universe through the transfer. But the stomach itself, being part of a living creature, cannot pass through the same switch. And the poor creature continually loses weight because of metabolism. Especially, of course, when he eats."

"Poor creature, you call him? You're too soft-hearted, Pojim. What do you think we'll be if we don't get the transfer back?"

He hunched up his shoulders and laughed.

Pojim said, "Control yourself, Zolto. When you laugh, you don't look human, and you certainly don't sound it."

"What difference does it make? We're alone."

"You can never tell when we'll be overheard."

"Don't change the subject. What are we supposed to do about the transfer?"

"We'll think of a way," said Pojim, but he could see she was worried.

IN the hospital, they had put Ollie into a bed. They had wanted a nurse to bathe him, but he had objected violently to this indignity, and finally they had sent in a male orderly to do the job. Now, bathed, shaven and wearing a silly little nightgown that made him ashamed to look

at himself, he was lying in bed, slowly starving to death.

A dozen empty plates, the remains of assorted specialties of the hospital, filled with vitamins and other good things, lay around him. Everything had tasted fine while going down, but nothing seemed to have stuck to him.

All he could do was brood about the puzzled and anxious looks on the doctors' faces when they examined him.

The attack came without warning. One moment Ollie was lying there unhappily, suffering hunger pangs, and the next moment somebody had punched him in the stomach. The shock made him start and then look down. But there was nobody near him. The doctors had left him alone while they looked up articles in textbooks and argued with each other.

He felt another punch, and then another and another. He yelled in fright and pain.

After five minutes, a nurse looked in and asked casually, "Did you call?"

"My stomach!" groaned Ollie. "Somebody's hittin' me in my stomach!"

"It's a tummysache," she said with a cheerful smile. "It should teach you not to wolf your food."

Then she caught a glimpse of his stomach, from which Ollie, in his agony, had cast off the sheet,

and she gulped. It was swollen like a watermelon — or, rather, like a watermelon with great warts. Lumps stuck out all over it.

She rushed out, calling, "Doctor Ianson! Doctor Manson!"

When she returned with two doctors, Ollie was in such acute misery that he didn't even notice them. One doctor said, "Well, I'll be damned!" and began tapping the swollen stomach.

The other doctor demanded, "When did this happen?"

"Right now, I guess," replied the nurse. "Just a few minutes ago his stomach was as flat as the way it was when you saw it."

"We'd better give him a shot of morphine to put him out of his pain," said the first doctor. "and then we'll X-ray him."

Ollie was in a semi-coma as they lifted him off his bed and wheeled him into the X-ray room. He didn't hear a word of the ensuing discussion about the photographs, although the doctors talked freely in front of him — freely and profanely.

It was Dr. Manson who demanded, "What in God's name are those things, anyway?"

"They look like pineapples and grapefruit," replied the bewildered X-ray specialist.

"Square-edged pineapples? Grapefruit with one end pointed?"

"I didn't say that's what they are," returned the other defensively. "I said that's what they look like. The grapefruit could be eggplant," he added in confusion.

"Eggplant, my foot. How the devil did they get into his stomach, anyway? He's been eating like a pig, but even a pig couldn't have gotten those things down its throat."

"Wake him up and ask him."

"He doesn't know any more than we do," said the nurse. "He told me that it felt as if somebody was hitting him in the stomach. That's all he'd be able to tell us."

"He's got the damndest stomach I ever heard of," marveled Dr. Manson. "Let's open it up and take a look at it from the inside."

"We'll have to get his consent," said the specialist nervously. "I know it would be interesting, but we can't cut into him unless he's willing."

"It would be for his own good. We'd get that unsliced fruit salad out of him." Dr. Manson stared at the X-ray plates again. "Pineapples, grapefruit, something that looks like a banana with a small bush on top. Assorted large round objects. And what looks like a nut. A small nut."

If Ollie had been aware, he might have told Dr. Manson that

the nut was the kernel of the trouble. As it was, all he could do was groan.

"He's coming to," said the nurse.

"Good," asserted Dr. Manson. "Get a release, Nurse, and the minute he's capable of following directions, have him sign it."

IN the corridor outside, two white-clad interns stopped at the door of Ollie's room and listened. They could not properly have been described as man and woman, but at any rate one was male and the other female. If you didn't look at them too closely, they seemed to be human, which, of course, was what they wanted you to think.

"Just as I said," observed Zolto. "They intend to operate. And their attention has already been drawn to the nut."

"We can stop them by violence, if necessary. But I abhor violence."

"I know, dear," Zolto said thoughtfully. "What has happened is clear enough. He kept sending all that food through, and our people analyzed it and discovered what it was. They must have been surprised to discover no message from us, but after a while they arrived at the conclusion that we needed some of our own food and they sent it to us. It's a good thing that they

didn't send more of it at one time."

"The poor man must be in agony as it is."

"Never mind the poor man. Think of our own situation."

"But don't you see, Zolto? His digestive juices can't dissolve such unfamiliar chemical constituents, and his stomach must be greatly irritated."

She broke off for a moment as the nurse came past them, giving them only a casual glance. The X-ray specialist followed shortly, his face reflecting the bewilderment he felt as a result of studying the plate he was holding.

"That leaves only Dr. Manson with him," said Zolto. "Pojim, I have a plan. Do you have any of those pandigestive tablets with you?"

"I always carry them. I never know when in this world I'll run into something my stomach can't handle."

"Fine." Zolto stepped back from the doorway, cleared his throat, and began to yell, "Calling Dr. Manson! Dr. Manson, report to surgery!"

"You've been seeing too many of their movies," said Pojim.

But Zolto's trick worked. They heard Dr. Manson mutter, "Damn!" and saw him rush into the corridor. He passed them without even noticing that they were there.

"We have him to ourselves," said Zolto. "Quick, the tablets."

They stepped into the room, where Zolto passed a small inhalator back and forth under Ollie's nose. Ollie jerked away from it, and his eyes opened.

"Take this," said Pojim, with a persuasive smile. "It will ease your pain." And she put two tablets into Ollie's surprised mouth.

Automatically, Ollie swallowed and the tablets sped down to meet the collection in his stomach. Pojim gave him another smile, and then she and Zolto were out of the room.

To Ollie, things seemed to be happening in more and more bewildering fashion. No sooner had these strange doctors left than Dr. Manson came rushing back, cursing, in a way that would have shocked Hippocrates, the unknown idiot who had summoned him to surgery. Then the nurse came in, with a paper. Ollie gathered that he was being asked to sign something.

He shook his head vigorously. "Not me. I don't sign *nothin'*, sister."

"It's a matter of life and death. Your own life and death. We have to get those things out of your stomach."

"No, sir, you're not cuttin' me open."

Dr. Manson gritted his teeth

in frustration. "You don't feel so much pain now because of the morphine I gave you. But it's going to wear off in a few minutes and then you'll be in agony again. You'll have to let us operate."

"No, sir," repeated Ollie stubbornly. "You're not cuttin' me open."

And then he almost leaped from his bed. His already distended stomach seemed to swell outward, and before the astonished eyes of doctor and nurse, a strange new bump appeared.

"Help!" yelled Ollie.

"That's exactly what we're trying to do," said Dr. Manson angrily. "Only you won't let us. Now sign that paper, man, and stop your nonsense."

Ollie groaned and signed. The next moment he was being rushed into the operating room.

THE morphine was wearing off rapidly, and he lay, still groaning, on the table. From the ceiling, bright lights beat down upon him. Near his head the anesthetist stood with his cone of sleep poised in readiness. At one side a happy Dr. Manson was slipping rubber gloves on his antiseptic hands, while the attentive nurses and assistants waited.

Two interns were standing near the doorway. One of them, Zolto,



said softly, "We may have to use violence after all. They must not find it."

"I should have given him a third tablet," said Pojira, the other intern, regretfully. "Who would have suspected that the action would be so slow?"

They fell silent. Zolto slipped a hand into his pocket and grasped the weapon, the one he had hoped he wouldn't have to use.

Dr. Manson nodded curtly and said, "Anesthetic."

And then, as the anesthetist bent forward, it happened. Ollie's uncovered stomach, lying there in wait for the knife, seemed to heave and boil. Ollie shrieked and, as the assembled medicos watched in dazed fascination, the knobs and bumps smoothed out. The whole stomach began to shrink, like a cake falling in when some one has slammed the oven door. The pandigestive tablets had finally acted.

Ollie sat up. He forgot that he was wearing the skimpy and shameless nightgown, forgot, too, that he had a roomful of spectators. He pushed away the anesthetist who tried to stop him.

"I feel fine," he said.

"Lie down," ordered Dr. Manson sternly. "We're going to operate and find out what's wrong with you."

"You're not cuttin' into me," said Ollie. He swung his feet to

the floor and stood up. "There ain't nothin' wrong with me. I feel wonderful. For the first time in my life I ain't hungry, and I'm spoilin' for trouble. Don't nobody try to stop me."

He started to march across the floor, pushing his way through the protesting doctors.

"This way," said one of the interns near the door. "We'll get your clothes." Ollie looked at her in suspicion, but she went on, "Remember? I'm the one who gave you the tablets to make the pain go away."

"They sure worked," said Ollie happily, and allowed himself to be led along.

He heard the uproar behind him, but he paid no attention. Whatever they wanted, he was getting out of here, fast. There might have been trouble, but at a critical point the public address system swung into operation, thanks to the foresight of his intern friends, who had rigged up a special portable attachment to the microphone. It started calling Dr. Manson, calling Dr. Kotanyi, calling Dr. Pumber, and all the others.

In the confusion, Ollie escaped and found himself, for the first time in his life, a passenger in a taxicab. With him were the two friendly interns, no longer in white.

"Just in case any more of those lumps appear in your stomach,"

said the female, "you'd better take another couple of tablets."

She was so persuasive that Ollie put up only token resistance. The tablets went down his stomach, and then he settled back to enjoy the cab ride. It was only later that he wondered where they were taking him. By that time, he was too sleepy to wonder very much.

With the aid of the first two tablets, he had digested the equivalent of a tremendous meal. The blood coursed merrily in his veins and arteries, and he had a warm sensation of well-being.

As the taxi sped along, his eyes closed.

"YOU transmitted the message in one of the latter tablets?" asked Zolto in their native tongue.

"I have explained all that has happened," replied his wife. "They will stop sending food and wait for other directives."

"Good. Now we'll have to get the transfer out of him as soon as possible. We ourselves can operate and he will never be the wiser."

"I wonder," said Pojim. "Once we have the transfer, it will only be a nuisance to us. We'll have to guard it carefully and be in continual fear of losing it. Perhaps it would be more sensible to leave it inside him."

"Inside him? Pojim, my sweet,

have you taken leave of your senses?"

"Not at all. It is easier to guard a man than a tiny object. I took a look at one of the X-ray plates, and it is clear that the transfer switch has adhered to his stomach. It will remain there indefinitely. Suppose we focus a transpositor on that stomach of his. Then, as the objects we want arrive from our own universe in their collapsed condition, we can transpose them into our laboratory, enlarge them, and send them off to Aldbaran, where they are needed."

"But suppose that he and that stomach of his move around?"

"He will stay in one place if we treat him well. Don't you see, Zolto? He is a creature who has always lacked food. We shall supply him such food as his own kind have never dreamed of, complete with pandigestion fluid. At the same time, we shall set him to doing light work in order to keep him busy. Much of his task will involve studying and improving himself. And at night we shall receive the things we need from our own universe."

"And when we have enough to supply the colony on Aldbaran II?"

"Then it will be time enough to remove the transfer switch."

Zolto laughed. It was a laugh that would have been curiously out of place in a human being,

and if the taxi driver hadn't been so busy steering his way through traffic, he would have turned around to look. Pojim sensed the danger, and held up a warning finger.

Zolto subsided. "You have remarkable ideas, my wife. Still, I see no reason why this should not work. Let us try it."

OLLIE awoke to a new life. He was feeling better than he had ever felt in his entire miserable existence. The two interns who had come along with him had been transformed magically into a kindly lady and gentleman, who wished to hire him to do easy work at an excellent salary. Ollie let himself be hired.

He had his choice of things to eat now, but, strangely enough, he no longer had his old hunger. It was as if he were being fed from some hidden source, and he ate, one might almost have said, for the looks of it. The little he did consume, however, seemed to go a long way.

He gained weight, his muscles hardened, his old teeth fell out and new ones appeared. He himself was astonished at this latter phenomenon, but after his previous experience at the hospital, he kept his astonishment to himself. The spots on his lungs disappeared, his spine straightened. After a time he reached a weight of a hundred and ninety pounds,

and his eyes were bright and clear. At night he slept the sleep of the just—or the drugged.

At first he was happy. But after several months, there came a feeling of boredom. He sought out Mr. and Mrs. Zolto, and said, "I'm sorry, I can't stay here any longer."

"Why?" asked the lady.

"There's no room here, ma'am, for advancement," he said, almost apologetically. "I've been studyin' and I got ideas about things I can do. All sorts of ideas."

Pojim and Zolto, who had planted the ideas, nodded solemnly.

Pojim said, "We're glad to hear that, Ollie. The fact is that we ourselves had decided to move to—to a warmer climate, some distance away from here. We were wondering how you'd get along without us."

"Don't you worry about me. I'll do fine."

"Well, that's splendid. But it would be convenient to us if you could wait till tomorrow. We'd like to give you something to remember us by."

"I'll be glad to wait, ma'am."

That night Ollie had a strange nightmare. He dreamed that he was on the operating table again, and that the doctors and nurses were once more closing in on him. He opened his mouth to scream, but no sound came out. And then

the two interns were there, once more wearing their uniforms.

The female said, "It's all right. It's perfectly all right. We're just removing the transfer switch. In the morning you won't even remember what happened."

And, in fact, in the morning he didn't. He had only a vague feeling that something had happened.

They shook hands with him and they gave him a very fine letter of reference, in case he tried to get another job, and Mrs. Zotto presented him with an envelope in which there were several bills whose size later made his eyes almost pop out of his head.

He walked down the street as if it belonged to him, or were going to. Gone was the slouch, gone the bleariness of the eyes, gone the hangdog look.

Gone was all memory of the dismal past.

And then Ollie had a strange feeling. At first it seemed so peculiar that he couldn't figure out what it was. It started in his stomach, which seemed to turn over and almost tie itself into a knot. He felt a twinge of pain and winced almost perceptibly.

It took him several minutes to realize what it was.

For the first time in months, he was hungry.

—WILLIAM MORRISON

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5 GALAXY'S STAR SHELF

TOMORROW THE STARS, edited by Robert A. Heinlein (Doubleday & Co., Inc., New York, 1952. 249 pages, \$2.95)

IT looks as though 1952 is going to be the Year of Anthologies—as if 1951 already hadn't been one. As of March, when this was written, a dozen collections have either appeared or been announced for Spring 1952 — of which the present one is among the best. This is only what one might expect, knowing Heinlein's own mature tastes.

There are 8 A stories in the book out of a total of 14. The balance are all Bs—there is noth-

ing poorer than B—. This is hot shooting when you remember that none of the tales has ever been anthologized before.

The "A" items—"I'm Scared" by Jack Finney (superb time story), "The Silly Season" by C. M. Kornbluth (chilling), "The Report on the Barnhouse Effect" by Kurt Vonnegut, Jr. (magnificent parapsychological tale), "Absalom" by Henry Kuttner (the mutant children), "Betelgeuse Bridge" by William Tenn (ironical), "Keyhole" by Murray Leinster (I loved this one!), "Misbegotten Missionary" by Isaac Asimov (a beauty), and—best story in the book in many ways

—"Poor Superman" by Fritz Leiber (better known to GALAXY readers as "Appointment in Tomorrow").

B—"Tourist Trade" by Bob Tucker, "Rainmaker" by John Reese, "The Monster" by Lester del Rey, "Jay Score" by Eric Frank Russell (a semi-classic), "The Sack" by William Morrison, and "Survival Ship" by Judith Merril.

Who says material for anthologies is running out?

THE ASTOUNDING SCIENCE FICTION ANTHOLOGY. Edited by John W. Campbell, Jr. Simon & Schuster, Inc., New York, 1952. 583 pages, \$3.95

THIS distinctively personal selection, by the Grand Old Man of science fiction editing, is a good indication of the history-making qualities of the magazine that has been his lifework. It contains 23 stories, of which 15 are A or better, and only 3 are C—and John Campbell's A stories are among the finest that science fiction has turned out.

Witness: Heinlein's "Blowups Happen," Asimov's "Nightfall," Padgett's "When the Bough Breaks," O'Donnell's "Clash by Night," Leinster's "First Contact," Dolton Edwards' very odd and non-fictional "Meiheim in Ce Klasrum," Sberred's "E for Ef-

fort," Tenn's "Child's Play," Sturgtion's "Thunder and Roses," Eric Russell's "Late Night Final," Kris Neville's "Cold War," Simak's "Eternity Lost," Schmitz's "The Witches of Karre," del Rey's "Over the Top," and Pyfe's "Protected Species"—any editor has a right to be proud of such a group of takes from his own magazine. There is only one thing wrong, and that is the editor's modesty. He included no story by himself—which leaves an empty spot right in the middle of the book.

But speaking of modesty, I am reluctantly guilty of it myself, for the next item is a guest review by Villiers Gerson of the New York Times and lots of other places:

INVADERS OF EARTH. Edited by Groff Conklin. Vanguard Press, New York, 1952. xiii plus 333 pages, \$2.95

GROFF CONKLIN'S newest anthology, whose theme, as its title suggests, is the invasion of Earth by everything from BEMs (although these are kept to a minimum) to energy forms, is an excellent collection of 22 tales, only one of which has ever been published between hard covers before. That one is Howard Koch's famous 1938 radio script for Orson Welles, "Invasion from

Mars," and it is certainly worthy of inclusion. Also included is a particularly notable "first," the initial appearance in English of Karl Grunert's 1907 story, "Enemies in Space," translated from the German by Willy Ley especially for this anthology.

This reviewer's favorites were Edgar Pangborn's "Angel's Egg," Ted Sturgeon's "Tiny and the Monster," and Fredric Brown's "The Waverics." In fact, although horror and menace are well represented, the existence of an up-beat in a great many of the stories gives the book a strong—and welcome — tone of affirmation.

—VILLIERS GERSON

JACK OF EAGLES, by James Blish. Greenberg: Publisher, New York, 1952. 246 pages, \$2.75

HERE'S a queer one. James Blish's first novel deals with parapsychology, and therefore, according to the modern, smart, fashionable logical positivists who today rule much scientific thinking, it must be called fantasy, a fairy tale.

On the other hand, Blish uses some of the very latest scientific ideas of outstanding men such as Heisenberg, Blackett, Dirac, Planck, and many other Big Names, to give a queerly logical realism to his tale of Danny

Caiden's struggle to develop his astonishing parapsychological powers. You may well leave the book considerably less skeptical about "the occult" (or parts of it) than you were when you started it.

The story is located in New York. Danny starts off as a small-time journalist; but before long his original talents have become literally useless, and his new ones have gotten him into hot water with the F.B.I., in contact with the true world of psimen, and in love with Marla, a provocative shill for a fake medium, who latches on to Danny on the theory that he must be a more successful fake than her previous boss. She changes this opinion, however, discovering eventually that she, too, has some parapsychological powers — and ethics.

Blish's writing is good, though not distinguished; his approach to the world of ideas is positive and constructive; and his ability to interweave exciting story and abstruse scientific explanation is remarkable. *Jack of Eagles* is a real accomplishment.

Approach it with an open mind, refuse to let your conventional disbeliefs in parapsychological matters get in your way, and you will have a very pleasant time reading it.

—GROFF CONKLIN

The Hoaxters

*When you station a couple of men
in space, make sure they have
a goal—and an occasional party!*

By RICHARD WILSON



Illustrated by WILLER

Ninety-second Day
YOU get yourself stuck off
on a rock in space and
after a while you begin to
go nuts. Naturally. That's why
Sam Black upset the chess board

halfway through a game he cer-
tainly had not been losing to Alex
Hurd.

"Sorry, Alex," he said immedi-
ately, looking disgusted with
himself. He picked the pieces

from the floor of the research station's dayroom.

"You've been out here too long," said Alex, putting the chessmen in their box.

"Yeah," Sam agreed. "It's not the company—it's the year between supply ships. We're compatible enough; our pre-tests ran enough alike for us to have been twins, almost. But I get damned tired of seeing nothing but your ugly face and those four laboratory walls."

"And the rolling pin," added Alex, whose pleasant face was long and high-boned, with a carefully tended mustache. "Rolling that hunk of steel over the rock specimens day after day. I've never really been convinced that it can't be done electrically, in a crusher. I think they want us to do it by hand so we'll earn our pay, maybe also to keep us too busy to think."

"It's the hand and the eye, Alex. The hand is slower than the eye, no matter what magicians say, and we could spot the particles. If we mashed everything up in a crusher, the stuff we're after would get sluiced away with the rock powder and we'd never see it."

"Assuming it's there to be seen."

"They wouldn't have sent us and our fat salaries out to this asteroid if there weren't a damn

good possibility of finding the stuff. So I guess we'll just have to go on pounding."

"And sneezing at the dust," added Alex.

"And going nuts," said Sam.

Ninety-ninth Day

THEY weren't entirely alone on the asteroid. There was a native form of sub-life that the first explorers had discovered. But it was mostly dormant and didn't live on the surface. It consisted of slate-colored, unicellular hunks of stuff, as Alex described them, which moved around at point zero one miles per hour. They lived deep down in what either were natural tunnels or passageways they dug for themselves.

They seemed to live on something in the rock—it was possible that they dug the tunnels not so much to travel where it was they wanted to go as to get nourishment. The hunks of stuff—they were about the size of a thumbnail—were so close in color to the rocks they lived in, and on, that they were nearly invisible.

Sam and Alex had been told about them, that they were harmless, and had named them vizzies, for invisibles. They were as much company on their dull world as microbes on Earth.

"Check," said Alex Hurd. It was the inevitable chess game.

"You fell into the trap," said

Sam Black, without enthusiasm. "Check yourself. I take the knight with my bishop and it's mate in two moves."

Alex studied the board and shrugged indifferently. "All right, you win. I'm getting careless. I'm tired. I want to go home. I want to see grass again, and trees. I hate rocks. I don't think we're doing anything important. I want to go back where the Sun comes up only once a day instead of every hour."

"Home is always nice when you're somewhere else," Sam said, his brown eyes far away. "But I wonder if it's home we miss as much as activity. If only something would happen here, the place wouldn't be so hard to take. But nothing ever happens. We crush rock. We test particles. We find nothing. We crush more rock. We don't even know what they'll use the stuff for if we ever find it."

"We send out the rocket. It takes pictures and beeps its way around this dead old watermelon and the pictures never show anything and the beep tone never discovers anything we didn't know was there in the first place. If only something would happen—*anything!* I don't give a damn if it's good or bad, just so it happens."

Sam had put the chess pieces away and now he made out their

report to Base. The message went out once a day—once every Earth day, that was; not every monotonous time the oblong asteroid that was their temporary world made a wobbly revolution on its axis.

Sam's leathery jaw tightened in distaste as he punched out the daily report. It consisted of four words, which hadn't varied in the three months, Earth reckoning, that they'd been at the station.

The words were: "All well. Progress nil."

It was the "progress nil" which got them down as much as any of the other things, such as their work being so secret that they had no inkling of how their particular research fitted into the Big Picture.

Their own work was the Little Picture, and it was a serial movie with interminable chapters. It was at this point in the dull drama that they began to wonder if they'd ever see the final installment, or whether they'd hand over their rock rollers to their successors at the end of their hitch without ever having known what it was all about.

"Progress nil." If they had anything at all to report, or even if the wording were different so it didn't sound so futile, their paid exile might have seemed less frustrating.

"Let me have the report," said

Alex. "I'm going to do something."

"What, for instance?"

"You'll see."

Alex took the blank. He crossed out the word "nil" with an angry motion of his pen, scratched his mustache reflectively, and then wrote busily for a minute. He handed the sheet back to Sam.

It now read:

"All well. Progress . . . Break for urgent. S.O.S. Research Station Nineteen. Attack on station by alien life-form from coordinates zero four eight x two seven. Request patrol craft blast spot as own armament ineffectual."

Sam read the message. "You're nuts," he said.

"I know it. Nuts from the monotony. Something's got to give and I don't want it to be me or you. We need a little excitement; you said so yourself."

"I was only talking. A gripe is a gripe, but sending out a false alarm—" He crumpled the message and tossed it away.

"Don't do that." Alex picked it up and smoothed it out. "We'll make it plausible. We'll blow up a couple of pieces of old junk near the station and send a few shells over. Set the stage, you know. The patrol will come and blast away and then the crew will come in and talk about it and we'll have a good story for them

and they'll stick around a while and we'll have new faces for a change and—"

Sam got up and paced around the small room. His serious face was pulled into a frown.

"We can't do it, Alex. It wouldn't be right. They'd find out it was a fake and we'd be kicked out in disgrace. What kind of menace could we whip up that would fool them? Not that we're going to, but just for argument's sake." He grinned, his eyes lighting with interest for once. "At least we can talk about it. It's better than chess."

"Good man," said Alex. "Of course, we won't do it if you don't think we can get away with it, or," he added hurriedly, "if you don't think it's right, Sam. But here's the way it could be. We could make the menace a stray explorer ship from Jupiter. Got off course, say, and landed here, thinking this was one of the asteroids in its own protectorate, instead of Earth's or Mars'. Mistaken identity, see? We send a message telling them to get off. Maybe the message is a little hot under the collar and they take offense—sling a shot at us. We fire back. Then they start shooting in earnest. We send the S.O.S. The patrol ship sends out one of its oblivion bombs. The patrol can't see the target, but it has the coordinates we gave them, and,

of course, after the explosion there's nothing left of the explorer from Jupiter."

"It stinks," Sam grunted in disgust. "If that's the way your mind works, no wonder you're such a dud at chess. Look, we've got to work with what we have. You can't queen a pawn till you get it in the back row. No pirate ships or interplanetary monsters or any such baloney. We'll use the vizzies. All of a sudden, see, they come up out of the ground. It's a periodic migration or something of the sort; you know, like the birds going South, only not so often. They stop being just little hunks of stuff and join up into a real, plausible menace. Get it?"

"Yeah," Alex replied, dazzled. "That's better than my idea any day."

Hundredth Day

THEY had sent out the fake distress signal, in a revised version, after twenty-four hours of preparation.

"I must be crazy," said Sam. "How did I ever let you talk me into this ridiculous situation? Let's cancel it—say we were drunk or delirious."

"We can't back out now, Sam." Alex's eyes were alive with excitement. "Look, here comes an answer now. We're in business."

Sam read it. "The patrol craft.

Coming at full speed from—God, it's a long way off! I hope the vizzies don't get us first."

"That's the spirit!" cried Alex. "Put yourself in the frame of mind and we'll be all right. Just picture it—the vizzies massed in tight Z formation, eating everything in their path, moving inexorably in our direction, as if they scent and resent us. The suspense is terrible. Will the patrol craft get here in time? Will the oblivion bomb have any effect? Will the brave researchers survive the creeping horde or will help arrive too late and find only human bones picked clean? Or will the bones, too, be consumed? Isn't it terrific? I feel like a kid at a football game again."

"But you look like a mad scientist," Sam was smiling now, caught up in Alex's infectious enthusiasm. His broad face was aglow. "Maybe you are crazy."

"Sure I'm crazy. So are you. But it's only temporary. This'll put us back on keel and we'll be able to stand it again for a while."

"Wait a minute," Sam said. "We forgot something. If the vizzies were attacking, wouldn't we have the photo rocket out taking pictures? The investigators are going to want to see the films."

"You're right," agreed Alex. "And we will show them a film, only they won't see a thing—just the landscape under infra-red.

The vizzies are invisible. Right? Well, they blend so well with the slate that no one could see them from that altitude. And I've faked some beeps on the electronic probe, so we're safe there, too."

Another message came from the patrol craft. It had streaked a vast distance since its last communication and was urging the men on the asteroid to hold on if they could.

Sam radioed back that time seemed to be favoring the defenders. They had lobbed a few shells, he said, but the old-fashioned explosives were having no effect. The vizzies were moving so slowly, however, that it would be several hours before they could reach the station. At Alex's suggestion, he explained that they were plotting the vizzies' position electronically and repeated the coordinates they had given earlier.

Half an hour later, the patrol craft hove into missile range, although not into sight, and advised that it was ready to launch a rocket with an oblivion-bomb warhead. The hoaxers on the asteroid corrected the coordinates to move the mythical horde a few yards nearer the research station; then they radioed that it was okay to fire.

The station shuddered and rocked on its deep foundations

as the o-bomb exploded nearly twenty miles away. The plotters sent out the photo rocket to take pictures. It came back with a film that showed an o-bomb crater a quarter of a mile across and a collection of beep tones that recorded a lot of radioactivity, but no vizzies.

Soon afterward, the patrol craft streaked across the star-filled sky and radioed for permission to land.

"Break out the clean tablecloth!" said Alex. "Company's coming!"

Hundred and First Day

"DO you think they suspect anything?" asked Sam. "They turn up their noses at our accommodations, they bunk and eat in their own ship, they roam around the rock as thick as berry-pickers and they ask more questions than a five-year-old."

"It's routine," said Alex unworriedly. "They have to make a report. Be thankful we don't have to. The skipper said we could have a copy of theirs to send on to Base. Have you run into any of the reporters? That's where we'll have to watch our step."

"I saw the press rocket land, but nobody's been around yet."

The buzzer sounded. A lean, tow-headed young man came in through the airlock, took off his gear and introduced himself as

Kirsten of Galactic News.

"Gentlemen," he said. "I assume you are the outcasts. Two of the far-flung researchers of the Exploration and Assessment Commission. If you are, and you must be, I greet you cordially and invite you to share with me this precious bottle. I offer it in the knowledge that if I were you, and if I had been here three months, I'd have drunk up every drop I might have brought with me against the possibility of snake-bite—or, in this particular case, vizzie-bite. Do I hear anyone decline?"

"You hear nothing of the sort," said Alex. "What you hear is me getting three glasses. I'm Alex Hurd; this is Sam Black."

"Delighted, gentlemen," said Kirsten. "The beauty of vizzie-bite, as I understand it, is that the critter can't be seen with the naked eye and that you are therefore unable to be absolutely certain whether you have received the mortal sting. And so you go to the medicinal licker—I beg your pardon, locker—according to schedule, as a precaution against the dread possibility of being a vizzie victim. Am I correct?"

"Do you always talk this way?" asked Sam.

"I talk the way I write, and I am a feature writer," said Kirsten. "For the other fellow, the

dress of cold fact, the colorless statistic; for me, the delicate fabric of embroidery, the phrase which recreates the scene in vivid life, the sentence which tugs at the heartstring and calls forth the tear, or evokes the smile of true understanding."

"Yeah, you do that, all right," Alex admitted.

The reporter sat down and poured three drinks from a half-full bottle.

"I have already been at it," said Kirsten, "as you will observe. I drink; it is my curse and my sorrow. But it is also my need and my joy. My editor often has said to me, 'Randy, you are one of the few who give the press corps a bad name. You are a lush, Randy, and your habit undoes the good impression made by the majority of the men of the press, who are sober men and faithful to their wives. But you are a writer, Randy, who has a way with words,' said my editor, 'and the way you have is such that you would be snapped up instantler by the opposition if I fired you, and that is why I have refrained from giving you the sack.' This is more or less what my editor often has said to me, and I repeat it to you by way of explanation should you think me unduly casual concerning what conceivably was a marrow-chilling experience."

Sam and Alex left their drinks untasted as they listened in admiration.

"This is as good as a floor show," said Alex.

"Better," said the reporter, unperturbed. "And there's absolutely no charge. Now, would one of you be so good as to describe your sensations for my stenographic ear? I will take no notes, but the polished substance of what you relate soon will be broadcast throughout the Solar System."

Kirsten tilted his chair back and looked expectantly from one to the other with his alert eyes.

They drank and talked. Alex carried the burden of the conversation for the pair, although Sam occasionally put in a word of further explanation. He also gave Alex a kick once or twice when he thought his partner was embroidering the fabric of their yarn too much, instead of letting Kirsten devise his own ways to tug at the heartstring.

They had barely killed the bottle when other reporters arrived. They dropped their gear on the floor and took out pocket-size stenotypers. Alex repeated their story for the latecomers' benefit and some fresh bottles were opened up. At intervals, reporters went out to file stories, Kirsten among them. But they came back and, their work finished, settled

down to have a party.

Crew members from the patrol ship joined the festivities in the researchers' dayroom, but the skipper remained aloof.

"Chess, anyone?" asked Alex, but it was a deck of cards he produced.

They played poker, drank, told stories and sang space ballads until the skipper came in to get Alex's and Sam's signatures on a statement and announce that his ship would be leaving in an hour.

The mission was completed. The skipper and the head of his investigation unit apparently were satisfied that the vizzie menace was ended.

The reporters had asked some astute questions, considering that they were laymen, but the plotters saw no hint of suspicion anywhere. They were jubilant. Their hoax had been a terrific success. They'd had their excitement. They'd had a lot of flattering attention. And they'd had a party.

Hundred and Forty-third Day
ALEX said: "Let's have a party."

"What?" said Sam. He was trimming a beard he had started to grow six weeks earlier.

"A party," repeated Alex. "I'm getting bored again. I think it's time for another vizzie menace."

"Nothing doing."

"Aw, please, Sam."

"No." He snipped carefully at the short whiskers.

"'No' or 'not yet'?" asked Alex.

"No," said Sam firmly. But then he added: "Well, not yet."

Hundred and Seventy-sixth Day

"YOU know," said Alex wistfully, "that was awfully good liquor Kirsten had."

"Who?" Sam's beard was quite full now. He combed it luxuriously.

"Kirsten, the reporter, that time we hoaxed them. Let's hoax them again, Sam. I could sure use some poker. I think if I play another game of chess, with you pulling away at that damn beaver you've worked up, I'll really go nuts. I feel like a pawn of fate, cast out into the void, left to be advanced one square at a time to my doom of ennui."

"Doom of what?" asked Sam, halting the comb.

"Ennui. Boredom."

"Just because you liked Kirsten's liquor, you don't have to start talking like him."

"I have a feeling I'm going to sound a lot worse pretty soon, if something doesn't happen. Then you'll be cooped up on this piece of nothing with a raving lunatic—maybe one with a beard phobia. You'll have to lock me up and roll all those rocks by yourself, and it'll take you twice as

long to get no place with this damn fool research as it does now, Sam, let's have a party. Let's make the vizzies march."

Sam said: "Well . . ."

Hundred and Eightieth Day

THE little spaceport on the asteroid was chockful of official craft. The patrol ship was there, an all-white vessel from World Government, two press ships this time, and a cumbersome-looking craft with cranes poking out of it.

The boys had cried wolf again, and this time they got more of a party than they had bargained for. The patrol ship had loosed another o-bomb. O-bombs were expensive. There was a second quarter-mile crater near the first and again there was no sign of a horde of vizzies. This was only natural, the hoaxers pointed out, because the o-bomb had obliterated them. But the skipper was not convinced.

Not this time.

He grilled Alex Hurd and Sam Black for two hours, then turned them over to his investigating officer, who grilled them some more. By then a World Government ship had arrived with a subcommissioner from the Exploration and Assessment Commission. The two researchers didn't dare back down now, and wearily they repeated their re-



heard story once more.

W. G. summoned an explorer ship and it came and poked its bores deep into the bowels of the asteroid. It lumbered here and there, as night and day chased themselves hourly around the tiny world, beeping electronically into the o-bomb craters, scooping up monstrous shovelfuls of slate and assaying them for signs of vizzies alive, vizzies dead, or vizzies disintegrated.

Then the reporters were allowed to see the two men. They came without liquor this time, but with broad grins and clever remarks. Sam and Alex squirmed through the interview. They stuck to their story, trying to pretend they didn't hear the cracks about the Moon hoax and the Cardiff giant, and repeating again and again their invented description of how the vizzies had attacked in Z formation, until they grew utterly sick of the ridiculous word vizzies—the reporters loved it — and their once-plausible story.

Kirsten was the worst of them. With his mock sympathy and his feigned seriousness, he almost trapped them a few times, but they wriggled out somehow.

The reporters finally left them alone and they collapsed on their bunks.

"Sam—" began Alex tentatively.

"Shut up," said Sam.

Kirsten dictated a story to *Galactic News*:

"By Randy Kirsten, Staff Correspondent.

"There is some doubt today whether a tiny creature of primitive life, known to the trade as a vizzie (repeat vizzie, spelled v-i-double z-i-e), is as man-eating in its mealtime habits as two young scientists seem to fear. The native habitat of the vizzie is a forlorn asteroid somewhere beyond Mars which also is populated, temporarily, by the two young men.

"Their job is a secret one. It is also dull, and it was with great excitement that they fell heir to what they described as an imminent vizzie invasion of their own little half-acre nearly three months ago. The space patrol nipped that vizzie menace in the bud, according to the record, on which doubt has now been cast.

"But yesterday the alarm again went out from Asteroid X that the vizzies once more were on the march . . ."

And so on, from Kirsten, for three thousand words.

Hundred and Ninety-fifth Day

"WE shouldn't have used that part about the Z formation," said Alex Hurd. "That's what sounded silliest of all."

"I've just succeeded in push-

ing the whole brainless stunt into my subconscious," Sam Black said. "I'll thank you to leave it there."

"I didn't bring up the subject. Base did. This message just arrived."

Sam took it. "Are we fired?"

"No. Just admonished. Pretty sarcastic, too, for an official document."

The message, from their chief, pointed out the cost of two oblivion bombs, the cost of twice diverting a patrol ship from its normal course, the cost of sending an exploration vessel to a remote asteroid which previously had been explored to everyone's satisfaction, the personal cost to him, the chief, in aggravation, and the cost to the Commission in prestige as a result of the sly news stories which had appeared after the second "problematical" vizzie attack, as he termed it.

It must be assumed, he went on, that there really was danger, inasmuch as there was no proof to the contrary. This assumption, he said, must be the official version and, for its own sake, not theirs, the Commission must accept it and defend it whenever the matter might be referred to in the future.

But, the chief's message added, it was also true that there was no evidence to back up the researchers' story and he privately felt

that the vizzie menace was a myth. Any subsequent deviation from routine without factual foundation, he warned, would be dealt with most harshly.

"File it," said Sam. "File it and remember it."

Two Hundred and Seventeenth Day

"THE rocket's back," announced Sam.

"Let's skip it this time. Watching that film always puts me to sleep, anyway."

"Come on. It's got to be done."

They got into their spacesuits and went out to the landing rack to see how the rocket had made out this time.

"Missed again," said Alex. "I'll get the tractor."

He lumbered out to the rocket in the half-track and hauled it back. He took out the film pack and they went indoors to run it on the projector.

"Let it roll," said Alex. "I'm ready to hiss the villain."

The projector reeled off the routine circumnavigation of the asteroid as it would have appeared to a pilot if there had been one aboard the guided rocket. It was dull, as usual, watching the unending vista of gray slats—punctuated now by two o-bomb craters—and listening to the accompanying electronic beeps.

But then, as the film was ending, the beep device went crazy. It began to chatter, to whine. Then it keened up into inaudibility.

Alex, who had been curled in his seat, watching and listening automatically, shot upright.

"Creeping beepers!" he shouted. "What's that?"

Sam stopped the projector. Tensely, he spun it back a hundred feet and re-ran the film from there.

As the beep tone began to chatter again, the film showed a flat plain which they recognized as being some miles west of them on the simulated compass. There was nothing visible on the plain—not from the height at which the photo rocket had taken the pictures—but the chatter became a whine as the flat land sped by.

The beep tone began keening as the craft sped toward a sheer cliff. The cliff was the edge of a plateau atop which the research station was built. The beep device went into its silence of super-sound just before the rocket passed over the cliff. The normal beep tone then returned and continued until the landing, when the film ended.

A magnification of the film strip showed nothing. The ground which had been photographed was flat, rocky and devoid of even plant life.

Working backward, the men found that the beep tone started acting up at the point where the film showed a small crater, not one of those made by the o-bombs. The crater had showed up on previous films, but it never seemed to mean anything except possibly that a meteor had struck there long ago. That was what it still looked like.

"This is a job for Buster," Sam decided.

Buster was their mechanical brain. He wasn't very bright, as such brains went, because there was no point in exiling one of the super-brains to a remote research station at a time when they were in great demand by Earth and the other developed planets.

Buster was fed the film. He chewed on it for a while, getting it into its proper channel, swallowed it and then digested it to the accompaniment of clicks and burps.

"Buster sure is a sloppy eater," Alex said, trying to cover up a case of nerves. "I hope this does not give him indigestion."

After a while Buster disgorged the film, together with a printed strip of paper. Sam grabbed it and compared the symbols on it with some on a chart hanging from one of Buster's buttons.

"I'll be damned!"

"What is it, Sam?"

"It's impossible. It couldn't

happen. Not to us."

"What, for God's sake?"

"Buster says—this isn't fair!—he says the vizzies are on the march."

Alex looked at his bearded partner without comprehension. "I don't get it. What makes him think so?"

"Buster doesn't think; he *knows*. You can work it back yourself. When those beeps turned into a whine, it meant something unusual. Even a kid knows that. Buster listened to the whine—or checked the impulses that caused the whine—and compared them with the impulses made by things we have records of. If he didn't know what they were, he would have said so. He didn't, which means he knows. He has a record of the impulse a vizzie causes when a beep hits it. And he says the whine was caused by a lot of vizzies, on the surface. The whine got worse—more vizzies. Then it got supersonic. More vizzies than could be recorded at the threshold of sound, obviously."

"It's impossible," Alex objected.

"That's what I said. But I was wrong."

"They're a hoax. They don't march. We made all that up. It was a gag!"

"Well," said Sam, "it's backfired on us."

Two Hundred and Eighteenth Day

THEY'D sent the rocket out again, switched to film and telecast so they would have a permanent record as well as an instantaneous picture of what was going on now. And they adjusted it for radar-telecast, now that they knew what they were looking for. One half of the screen showed them the scene under infra-red in the brief night—a desolate plain of cindery slate, ending at a cliff. Apparently nothing moved.

But there on the other half of the screen, glowing in a mass that stretched along the base of the cliff and for as far back as could be seen, was an undulating sea of vizzies.

"At least they're not in Z formation," Sam pointed out.

"Ha, ha," said Alex in a flat voice.

"Can you make out whether any of them are on the face of the cliff itself? Climbing up it?"

"Wait till the rocket circles again. No, I can't tell. Can you see anything, Sam?"

"Look! There goes a piece of the cliff. Crashing down as if—I'll bet that's it, Alex. They're eating away the base of the cliff. They can't go up it, so they're eating their way under it. Millions of them—*billions*!"

"Call the patrol ship," said

Alex. "At the rate they're going, they'll be here in a couple of days. There won't be any more plateau and our station'll go crashing down just like the cliff."

"Take it easy," suggested Sam. "The patrol ship wouldn't be anxious to come see us a third time. Remember, we're the boys who cried wolf."

"Sure, but there's the- wolf! This time it's for real."

"Real, yes," Sam told him. "But is it dangerous? We're still keyed up to that make-believe menace we created. I don't think we're being entirely logical about this situation."

"Okay. Ten minutes out for logic. I vote for calling the ship and an o-bomb and taking our chances with their ridicule. But maybe you can make me change my mind."

"This gives us a chance to get out of the doghouse. It couldn't be more perfect. If we can wrap up this situation ourselves, we'll be the fair-haired boys again, instead of a couple of rock-happy bats."

They dug into old records at the station. They measured the length and width of the vizzie horde and its depth. They found that the creatures were eating vertically into the surface of the plain as well as forward. They sent the photo-rocket out on a shuttle basis, set to both telecast

and film. They peered at the video screen and examined the film. They satisfied themselves that the plateau, with its sheer cliffs, was a natural, if temporary, barrier to the horde. They computed the rate at which the plateau was being eaten away and found that they had a comfortable span of time in which to make preparations.

Night gave way to day.

From the old records they learned that the vizzies had never been run through a laboratory. The early explorers had satisfied themselves that the creatures were subterranean dwellers and had sounded them out with old-fashioned oscilloscopes to get a few basic facts about them. Then, convinced that they were useless and harmless, they had ignored the vizzies. They hadn't even named them.

There were some reports that the creatures made an occasional pilgrimage to the surface—"I must have half-remembered that when I was concocting our yarn," said Sam—but the reports had been undocumented and were put down to legend. There was no official record of such a visitation having occurred.

Until now.

ALEX attached a grapple to the pilotless rocket and sent it out to get some samples. They

watched on the screen as the craft dipped low and scooped up a bucketful at the end of a cable. When these were fetched to them, the researchers cautiously transferred the vizzies, by remote-control handlers, to a huge copper tank. Their slate color showed up well against the bright copper and the men watched as the creatures boiled around in the hot-tom of it.

The short day of the asteroid waned. The fleeting dusk became night as successive tests showed that the tiny vizzies had no taste for copper, iron, steel, lead, zinc, or any other metal or alloy of metal. But when rock or slate was dropped into a container with the creatures, it was gobbled up in a twinkling.

"At the rate they eat," said Alex, "you'd think they'd have gorged their way clear through the asteroid by now."

"Unless," suggested Sam, "they have only a short feeding season—which is what this must be—and they spend the rest of the time back underground, digesting."

But this question was academic. The problem was how to stop the horde from crunching into the cliff face and causing avalanches which eventually would undermine their plateau-top research station. It wasn't only a question of keeping the

vizzies from overrunning the place; they had to be kept from collapsing it from underneath.

The problem had answered itself, in part, the next time the unmanned rocket flew over the horde. Continuing rock falls had transformed the plateau edge from a sheer cliff to a slope—a slope the vizzies were capable of climbing. And up they were coming, clearly shown in the image on the radar screen.

Sam tugged thoughtfully at his beard and Alex chewed on the end of a mustache which had become scraggly, while they watched the vizzies glitter their eerie way to the summit.

"Look," said Alex, "couldn't we fence in the station with metal? It'd take a lot of fence, but we could do it. Then, even if they ate around us, we'd still be standing on solid ground."

"If you're thinking of the cyclone fencing we have in the warehouse," Sam pointed out, "you're thinking the wrong think. Metal doesn't repel them; they just don't like the taste of it. And the holes in a cyclone fence are plenty big enough for them to crawl through to get to the rock on the other side. Then they'd eat the foundations right out from under us."

"Yeah," said Alex. "That's a fact."

He sat down and thought hard.

He got up and ran the latest films from the rocket through the projector. As he studied them, worrying his mustache with his teeth, he brightened.

"Now I have got it!"

ALEX snatched up a portable searchlight and his gear and dashed out into the airlock.

Sam hammered on the door, then clambered into his own gear and went out through the second airlock. He chased after Alex through the starry night.

"Wait, you crazy nut!" he yelled.

He caught up with Alex near the edge of the plateau. By now the vizzies had reached the top and were moving forward with barely perceptible speed.

Alex fingered the controls on his gravity belt and soared a dozen feet into the airless sky, then nudged himself forward until he was above the horde. He played his searchlight down on the vizzies, first at one angle, then another.

The creatures were brightly visible, now that the men were so close to them. They continued to move forward. Sam stepped back and shouted at Alex. His voice was tinny in the transmitter.

"Get down from there, you dope! What happens if you fall in?"

"You might have to play solo chess," Alex replied placidly. "But don't worry. I think I've got them licked. Are they still moving?"

"Hell, yes!" cried Sam. Involuntarily, he stepped back another couple of feet. "If anything, they're moving faster."

"Good," said Alex from up in the air. "Now we'll see."

He dipped into a shallow dive and landed neatly beside Sam.

"Watch," he said.

Alex squatted, only inches from the vanguard of the vizzie plague, and shone his torch directly at it.

The creatures were stopping!

Moreover, they were retreating as the powerful light continued to play directly on them from the front.

"Come on," said Alex. "That's the answer."

The men went back to their station and turned on all the lights, letting them shine through the broad glass windows on the slate surrounding the buildings. A battery of searchlights set low at strategic spots completed their defenses.

"It clicked all of a sudden," Alex said. "We're east of the horde and they moved so slowly it was hard to tell. But for a few minutes, when the Sun rose, it was shining directly in their eyes, so to speak. It stopped them—

but only for as long as the Sun was on the horizon. After that, the shell of their backs gave them protection and they came on again.

"And remember when we had those test vizzies in the copper pot in the lab?" asked Alex. "You saw how they went boiling around in it. They not only don't like horizontal light—they can't stand it. The light above the pot reflected on them from the shiny copper inside at all angles. It was too much for them."

When the time came for the men to send their daily report, the vizzies were swarming outside the station. It was entirely sur-

rounded, but the creatures kept well beyond the shining circle of light.

The message to Base consisted of only four words:

"All well. Progress nil."

Two Hundred and Nineteenth Day

"THEY don't like animal flesh or cloth or rubber, either," said Alex. "So even if my light hadn't stopped them, I'd have been perfectly safe among them, out there."

"You didn't know that until today, though," Sam objected. "What else do the tests show?"

"That's all so far, Sam. Except



that I think they're cute. Have you had a good look at one close up?"

Alex had a vizzie in his palm. He held it out to Sam.

Sam shuddered. "Disgusting little thing," he said.

"It's wiggling like that because the light's in its little eyes."

"Just keep your little pet to yourself," advised Sam. "It looks like the thumbnail of a corpse. What the hell are you doing now?"

"Feeding it," said Alex, picking up a slate pebble. "Poor little thing's hungry."

In a series of wriggles, the creature made its way across the



lines of Alex's palm to the pebble and wrapped itself around it. The pebble vanished. Alex put another bit of rock on the opposite side of his palm and the vizzie wriggled toward it. That, too, disappeared.

Sam watched the performance with an expression of revulsion. But the expression changed.

"Alex!" he yelled. "Look! It didn't eat all the pebble. See what's left?"

"Where?" Alex examined his palm frowningly. "I don't see anything."

"The light has to hit it just right, it's so tiny—just a speck!"

Alex saw it now, too. But he said: "What of it? My vizzie's a fastidious eater. Likes to leave a little something on the plate."

"Let me test it," said Sam. "Just on a hunch."

And, of course, that was it.

THE appetite of a vizzie led them to what they had been looking for in the slate rock—the rock they'd pounded and rolled in vain for seven months. They'd been unable to see the rare earth because it was in so minute a ratio to the rock itself.

"What dumb luck!" Sam exulted. "The stuff turns out to be the one part of the slate the vizzie doesn't like—an infinitesimal bit of mineral. So small we could have gone on pounding rock till

Doomsday without seeing it. Think how many pounds of the stuff we must have sluiced away, never knowing it was there!"

"Sweet little vizzie." Alex scratched the back of the creature in his palm. "I'm going to get you a whole boulder to nibble on to your heart's content."

"It is kind of cute at that, isn't it?" remarked Sam. He grinned. "Do you know what this means, Alex? Do you get the whole picture?"

"Sure," said Alex solemnly. "It means we'll have to catch a whole mess of vizzies and feed them rock, and then gather up their leavings. And I was afraid I'd have to do it all by myself because I thought you'd become a vizziephobe."

"You blathering moron! It means that every bit of ground the vizzies have eaten their way across is already panned for us. The plain, the cliff, the plateau—even our front yard. All we have to do to get the mineral is go out and scoop it up."

"Well, sure," Alex said. "That's fine, of course. But that means no more crushing and picking rock, which means even more time to go betty."

"What have you got in mind?" Sam asked suspiciously.

Alex looked wistful. "I wish we could have another party."

—RICHARD WILSON

The Luckiest Man in Denv

By SIMON EISNER

*To get the break of his life,
all Reuben had to do was turn
the death trap into a jackpot!*

Illustrated by ENSH

MAY'S man Reuben, of the eighty-third level, Atomist, koew there was something wrong when the binoculars flashed and then went opaque. Inwardly he cursed, hoping that he had not committed himself to anything. Outwardly he was unperturbed. He handed the binoculars back to Rudolph's man Almon, of the eighty-ninth level, Maintainer, with a smile.

"They aren't very good," he said.

Almon put them to his own eyes, glanced over the parapet and swore mildly. "Blacker than the heart of a crazy Angel, eh? Never mind; here's another pair."

This pair was unremarkable. Through it, Reuben studied the thousand setbacks and pent-houses of Denv that ranged themselves below. He was too worried to enjoy his first sight of the vista from the eighty-ninth level, but he let out a murmur of appreciation. Now to get away from

this suddenly sinister fellow and try to puzzle it out.

"Could we—?" he asked cryptically, with a little upward jerk of his chin.

"It's better not to," Almon said hastily, taking the glasses from his hands. "What if somebody with stars happened to see, you know? How'd you like it if you saw some impudent fellow peering up at you?"

"He wouldn't dare!" said Reuben, pretending to be stupid and indignant, and joined a moment later in Almon's sympathetic laughter.

"Never mind," said Almon. "We are young. Some day, who knows? Perhaps we shall look from the ninety-fifth level, or the hundredth."

Though Reuben knew that the Maintainer was no friend of his, the generous words sent blood hammering through his veins; ambition for a moment.

He pulled a long face and told Almon: "Let us hope so. Thank you for being my host. Now I must return to my quarters."

He left the windy parapet for the serene luxury of an eighty-ninth-level corridor and descended slow moving stairs through gradually less luxurious levels to his own Spartan floor. Selene was waiting, smiling, as he stepped off the stairs.

She was decked out nicely—

too nicely. She wore a steelly bued corselet and a touch of scent; her hair was dressed long. The combination appealed to him, and instantly he was on his guard. Why had she gone to the trouble of learning his tastes? What was she up to? After all, she was Griffin's woman.

"Coming down?" she asked, awed. "Where have you been?"

"The eighty-ninth, as a guest of that fellow Almon. The vista is immense."

"I've never been . . ." she murmured, and then said decisively: "You belong up there. And higher. Griffin laughs at me, but he's a fool. Last night in chamber we got to talking about you. I don't know how, and he finally became quite angry and said he didn't want to hear another word." She smiled wickedly. "I was revenged, though."

Blank-faced, he said: "You must be a good hand at revenge, Selene, and at stirring up the need for it."

The slight hardening of her smile meant that he had scored and he hurried by with a rather formal salutation.

Burn him for an Angelo, but she was easy enough to take! The contrast of the metallic garment with her soft, white skin was disturbing, and her long hair suggested things. It was hard to think of her as scheming some-

thing or other; scheming Selene was displaced in his mind by Selene in chamber.

But what was she up to? Had she perhaps heard that he was to be elevated? Was Griffin going to be swooped on by the Main-tainers? Was he to kill off Griffin so she could leech onto some rising third party? Was she perhaps merely giving her man a touch of the lash?

He wished gloomily that the binoculars-problem and the Selene-problem had not come together. That trickster Almon had spoken of youth as though it were something for congratulation; he hated being young and stupid and unable to puzzle out the faulty binoculars and the warmth of Griffin's woman.

THE attack alarm roared through the Spartan corridor. He ducked through the nearest door into a vacant bedroom and under the heavy steel table. Somebody else floundered under the table a moment later, and a third person tried to join them.

The firstcomer roared: "Get out and find your own shelter! I don't propose to be crowded out by you or to crowd you out either and see your ugly blood and brains if there's a hit. Go, now!"

"Forgive me, sir! At once, sir!" the latecomer wailed; and scrambled

away as the alarm continued to roar.

Reuben gasped at the "sirs" and looked at his neighbor. It was May! Trapped, no doubt, on an inspection tour of the level.

"Sir," he said respectfully, "if you wish to be alone, I can find another room."

"You may stay with me for company. Are you one of mine?" There was power in the general's voice and on his craggy face.

"Yes, sir. May's man Reuben, of the eighty-third level, Atomist."

May surveyed him, and Reuben noted that there were pouches of skin depending from cheekbones and the jaw line—dead-looking, coarse-pored skin.

"You're a well-made boy, Reuben. Do you have women?"

"Yes, sir," said Reuben hastily. "One after another — I always have women. I'm making up at this time to a charming thing called Selene. Well-rounded, yet firm, soft but supple, with long red hair and long white legs—"

"Spare me the details," muttered the general. "It takes all kinds. An Atomist, you said. That has a future, to be sure. I myself was a Controller long ago. The calling seems to have gone out of fashion—"

Abruptly the alarm stopped. The silence was hard to bear.

May swallowed and went on:

"—for some reason or other. Why don't youngsters elect for Controller any more? Why didn't you, for instance?"

Reuben wished he could be saved by a direct hit. The binoculars, Selene, the raid, and now he was supposed to make intelligent conversation with a general.

"I really don't know, sir," he said miserably. "At the time there seemed to be very little difference — Controller, Atomist, Missiler, Maintainer. We have a saying, 'The buttons are different,' which usually ends any conversation on the subject."

"Indeed?" asked May distractedly. His face was thinly filmed with sweat. "Do you suppose Ellay intends to clobber us this time?" he asked almost hoarsely. "It's been some weeks since they made a maximum effort, hasn't it?"

"Four," said Reuben. "I remember because one of my best Servers was killed by a falling corridor roof—the only fatality and it had to happen to my team!"

He laughed nervously and realized that he was talking like a fool, but May seemed not to notice.

Far below them, there was a series of screaming whistles as the interceptors were loosed to begin their intricate, double basenetwork wall of defense in a

towering cylinder about Denav.

"Go on, Reuben," said May. "That was most interesting." His eyes were searching the underside of the steel table.

Reuben averted his own eyes from the frightened face, feeling some awe drain out of him. Under a table with a general! It didn't seem so strange now.

"Perhaps, sir, you can tell me what a puzzling thing, that happened this afternoon, means. A fellow — Rudolph's man Almon, of the eighty-ninth level—gave me a pair of binoculars that flashed in my eyes and then went opaque. Has your wide experience—"

May laughed hoarsely and said in a shaky voice: "That old trick! He was photographing your retinas for the blood-vessel pattern. One of Rudolph's men, eh? I'm glad you spoke to me: I'm old enough to spot a revival like that. Perhaps my good friend Rudolph plans—"

There was a thudding volley in the air and then a faint jar. One had got through, exploding, from the feel of it, far down at the foot of Denav.

The alarm roared again, in bursts that meant all clear; only one flight of missiles and that disposed of.

THE Atomist and the general climbed out from under the

table; May's secretary popped through the door. The general waved him out again and leaned heavily on the table, his arms quivering. Reuben hastily brought a chair.

"A glass of water," said May.

The Atomist brought it. He saw the general wash down what looked like a triple dose of xxx—green capsules which it was better to leave alone.

May said after a moment: "That's better. And don't look so shocked, youngster; you don't know the strain we're under. It's only a temporary measure which I shall discontinue as soon as things ease up a bit. I was saying that perhaps my good friend Rudolph plans to substitute one of his men for one of mine. Tell me, how long has this fellow Almon been a friend of yours?"

"He struck up an acquaintance with me only last week. I should have realized—"

"You certainly should have. One week. Time enough and more. By now you've been photographed, your fingerprints taken, your voice recorded and your gait studied without your knowledge. Only the retinoscope is difficult, but one must risk it for a real double. Have you killed your man, Reuben?"

He nodded. It had been a silly brawl two years ago over precedence at the refectory; he dis-

liked being reminded of it.

"Good," said May grimly. "The way these things are done, your double kills you in a secluded spot, disposes of your body and takes over your role. We shall reverse it. You will kill the double and take over *his* role."

The powerful, methodical voice ticked off possibilities and contingencies, measures, and countermeasures. Reuben absorbed them and felt his awe return. Perhaps May had not really been frightened under the table; perhaps it had been he reading his own terror in the general's face. May was actually talking to him of backgrounds and policies. "Up from the eighty-third level!" he swore to himself as the great names were uttered.

"My good friend Rudolph, of course, wants the five stars. You would not know this, but the man who wears the stars is now eighty years old and failing fast. I consider myself a likely candidate to replace him. So, evidently, must Rudolph. No doubt he plans to have your double perpetrate some horrible blunder on the eve of the election, and the discredit would reflect on me. Now what you and I must do—"

You and I—May's man Reuben and May—up from the eighty-third! Up from the bare corridors and cheerless bedrooms

to marble halls and vaulted chambers! From the clatter of the crowded refectory to small and glowing restaurants where you had your own table and servant and where music came softly from the walls! Up from the scramble to win this woman or that, by wit or charm or the poor bribes you could afford, to the eminence from which you could calmly command your pick of the beauty of Deny! From the moiling intrigue of tripping your fellow Atomist and guarding against him tripping you to the heroic thrust and parry of generals!

Up from the eighty-third!

Then May dismissed him with a speech whose implications were deliciously exciting. "I need an able man and a young one, Reuben. Perhaps I've waited too long looking for him. If you do well in this touchy business, I'll consider you very seriously for an important task I have in mind."

LATE that night, Selene came to his bedroom.

"I know you don't like me," she said pettishly, "but Griffin's such a fool and I wanted somebody to talk to. Do you mind? What was it like up there today? Did you see carpets? I wish I had a carpet."

He tried to think about carpets and not the exciting contrast of

metallic cloth and flesh.

"I saw one through an open door," he remembered. "It looked odd, but I suppose a person gets used to them. Perhaps I didn't see a very good one. Aren't the good ones very thick?"

"Yes," she said. "Your feet sink into them. I wish I had a good carpet and four chairs and a small table as high as my knees to put things on and as many pillows as I wanted. Griffin's such a fool. Do you think I'll ever get those things? I've never caught the eye of a general. Am I pretty enough to get one, do you think?"

He said uneasily: "Of course you're a pretty thing, Selene. But carpets and chairs and pillows—" It made him uncomfortable, like the thought of peering up through binoculars from a parapet.

"I want them," she said unhappily. "I like you very much, but I want so many things and soon I'll be too old even for the eighty-third level, before I've been up higher, and I'll spend the rest of my life tending babies or cooking in the creche or the refectory."

She stopped abruptly, pulled herself together and gave him a smile that was somehow ghastly in the half-light.

"You bungler," he said, and she instantly looked, at the door with the smile frozen on her face. Reuben took a pistol from under

his pillow and demanded, "When do you expect him?"

"What do you mean?" she asked shrilly. "Who are you talking about?"

"My double. Don't be a fool, Selene. May and I—" he savored it—"May and I know all about it. He warned me to beware of a diversion by a woman while the double slipped in and killed me. When do you expect him?"

"I really do like you," Selene sobbed. "But Almon promised to take me up there and I knew when I was where they'd see me that I'd meet somebody really important. I really do like you, but soon I'll be too old—"

"Selene, listen to me. Listen to me! You'll get your chance. Nobody but you and me will know that the substitution didn't succeed!"

"Then I'll be spying for you on Almon, won't I?" she asked in a choked voice. "All I wanted was a few nice things before I got too old. All right, I was supposed to be in your arms at 2350 hours."

IT was 2349. Reuben sprang from bed and stood by the door, his pistol silenced and ready. At 2350 a naked man slipped swiftly into the room, heading for the bed as he raised a ten-centimeter poignard. He stopped in dismay when he

realized that the bed was empty.

Reuben killed him with a bullet through the throat.

"But he doesn't look a bit like me," he said in bewilderment, closely examining the face. "Just in a general way."

Selene said dully: "Almon told me people always say that when they see their doubles. It's funny, isn't it? He looks just like you, really."

"How was my body to be disposed of?"

She produced a small flat box. "A shadow suit. You were to be left here and somebody would come tomorrow."

"We won't disappoint him." Reuben pulled the web of the shadow suit over his double and turned on the power. In the half-lit room, it was a perfect disappearance; by daylight it would be less perfect. "They'll ask why the body was shot instead of knifed. Tell them you shot me with the gun from under the pillow. Just say I heard the double come in and you were afraid there might have been a struggle."

She listlessly asked: "How do you know I won't betray you?"

"You won't, Selene." His voice bit. "You're broken."

She nodded vaguely, started to say something and then went out without saying it.

Reuben luxuriously stretched



in his narrow bed. Later, his beds would be wider and softer, he thought. He drifted into sleep on a half-formed thought that some day he might vote with other generals on the man to wear the five stars—or even wear them himself, Master of Denv.

He slept healthily through the morning alarm and arrived late at his regular twentieth-level station. He saw his superior, May's man Oscar of the eighty-fifth level, Atomist, ostentatiously take his name. Let him!

Oscar assembled his crew for a grim announcement: "We are going to even the score, and perhaps a little better, with Ellay. At sunset there will be three

flights of missiles from Deck One."

There was a joyous murmur and Reuben trotted off on his task.

All forenoon he was occupied with drawing plutonium slugs from hyper-suspicious storekeepers in the great rock-quarried vaults, and seeing them through countless audits and assays all the way to Weapons Assembly. Oscar supervised the scores there who assembled the curved slugs and the explosive lenses into sixty-kilogram warheads.

In mid-afternoon there was an incident. Reuben saw Oscar step aside for a moment to speak to a Maintainer whose guard fell on



one of the Assembly Servers, and dragged him away as he pleaded innocence. He had been detected in sabotage. When the warheads were in and the Missilers seated, waiting at their boards, the two Atomists rode up to the eighty-third's refectory.

The news of a near-maximum effort was in the air; it was electric. Reuben heard on all sides in tones of self-congratulation: "We'll clobber them tonight!"

"That Server you caught," he said to Oscar. "What was he up to?"

His commander stared. "Are you trying to learn my job? Don't try it, I warn you. If my black marks against you aren't enough,

I could always arrange for some fissionable material in your custody to go astray."

"No, no! I was just wondering why people do something like that."

Oscar sniffed doubtfully. "He's probably insane, like all the Angelos. I've heard the climate does it to them. You're not a Maintainer or a Controller. Why worry about it?"

"They'll brainburn him, I suppose?"

"I suppose. Listen!"

DECK One was firing. One, two, three, four, five, six. One, two, three, four, five, six. One, two, three, four, five, six.

People turned to one another and shook hands, laughed and slapped shoulders heartily. Eighteen missiles were racing through the stratosphere, soon to tumble on Ellay. With any luck, one or two would slip through the first wall of interceptors and blast close enough to smash windows and topple walls in the crazy city by the ocean. It would serve the lunatics right.

Five minutes later an exultant voice filled most of Denv.

"Recon missile report," it said. "Eighteen launched, eighteen perfect trajectories. Fifteen shot down by Ellay first-line interceptors, three shot down by Ellay second-line interceptors. Extensive blast damage observed in Griffith Park area of Ellay!"

There were cheers.

And eight Full Maintainers marched into the refectory silently, and marched out with Reuben.

He knew better than to struggle or ask futile questions. Any question you asked of a Maintainer was futile. But he goggled when they marched him onto an upward-bound stairway.

They rode past the eighty-ninth level and Reuben lost count, seeing only the marvels of the upper reaches of Denv. He saw carpets that ran the entire length of corridors, and intricate fountains, and mosaic walls,

stained-glass windows, more wonders than he could recognize, things for which he had no name.

He was marched at last into a wood-paneled room with a great polished desk and a map behind it. He saw May, and another man who must have been a general — Rudolph? — but sitting at the desk was a frail old man who wore a circlet of stars on each khaki shoulder.

The old man said to Reuben: "You are an Ellay spy and saboteur."

Reuben looked at May. Did one speak directly to the man who wore the stars, even in reply to such an accusation?

"Answer him, Reuben," May said kindly.

"I am May's man Reuben, of the eighty-third level, an Atomist," he said.

"Explain," said the other general heavily, "if you can, why all eighteen of the warheads you procured today failed to fire."

"But they did!" gasped Reuben. "The Recon missile report said there was blast damage from the three that got through and it didn't say anything about the others failing to fire."

The other general suddenly looked sick and May looked even kindlier. The man who wore the stars turned inquiringly to the chief of the Maintainers, who nodded and said: "That was the

Recon missile report, sir."

The general snapped: "What I said was that he would attempt to sabotage the attack. Evidently he failed. I also said he is a faulty double, somehow slipped with great ease into my good friend May's organization. You will find that his left thumb print is a clumsy forgery of the real Reuben's thumb print and that his hair has been artificially darkened."

The old man nodded at the chief of the Maintainers, who said: "We have his card, sir."

Reuben abruptly found himself being fingerprinted and deprived of some hair.

"The f.p.s. check, sir," one Maintainer said. "He's Reuben."

"Hair's natural, sir," said another.

The general began a fear-guard action: "My information about his hair seems to have been inaccurate. But the fingerprint means only that Ellay spies substituted his prints for Reuben's prints in the files—"

"Enough, sir," said the old man with the stars. "Dismissed. All of you. Rudolph, I am surprised. All of you, go."

REBUBEN found himself in a vast apartment with May, who was bubbling and chuckling uncontrollably until he popped three of the green capsules into

his mouth hurriedly.

"This means the eclipse for years of my good friend Rudolph," he crowed. "His game was to have your double sabotage the attack warheads and so make it appear that my organization is rotten with spies. The double must have been under post-hypnotic, primed to admit everything. Rudolph was so sure of himself that he made his accusations before the attack, the fool!"

He fumbled out the green capsules again.

"Sir," said Reuben, alarmed.

"Only temporary," May muttered, and swallowed a fourth. "But you're right. You leave them alone. There are big things to be done in your time, not in mine. I told you I needed a young man who could claw his way to the top. Rudolph's a fool. He doesn't need the capsules because he doesn't ask questions. Funny, I thought a coup like the double affair would hit me hard, but I don't feel a thing. It's not like the old days. I used to plan and plan, and when the trap went snap it was better than this stuff. But now I don't feel a thing."

He leaned forward from his chair; the pupils of his eyes were black bullets.

"Do you want to work?" he demanded. "Do you want your

world stood on its head and your brains to crack and do the only worthwhile job there is to do? Answer me!"

"Sir, I am a loyal May's man. I want to obey your orders and use my ability to the full."

"Good enough," said the general. "You've got brains, you've got push. I'll do the spade work. I won't last long enough to push it through. You'll have to follow. Ever been outside of Denv?"

Reuben stiffened.

"I'm not accusing you of being a spy. It's really all right to go outside of Denv. I've been outside. There isn't much to see at first—a lot of ground pocked and torn up by shorts and overs from Ellay and us. Farther out, especially east, it's different. Grass, trees, flowers. Places where you could grow food."

"When I went outside, it troubled me. It made me ask questions. I wanted to know how we started. Yes — started. *It wasn't always like this.* Somebody built Denv. Am I getting the idea across to you? *It wasn't always like this!*"

"Somebody set up the reactors to breed uranium and make plutonium. Somebody tooled us up for the missiles. Somebody wired the boards to control them. Somebody started the hydroponics tanks."

"I've dug through the archives."

Maybe I found something. I saw mountains of strength reports, ration reports, supply reports, and yet I never got back to the beginning. I found a piece of paper and maybe I understood it and maybe I didn't. It was about the water of the Colorado River and who should get how much of it. How can you divide water in a river? But it could have been the start of Denv, Ellay, and the missile attacks."

The general shook his head, puzzled, and went on: "I don't see clearly what's ahead. I want to make peace between Denv and Ellay, but I don't know how to start or what it will be like. I think it must mean not firing, not even making any more weapons. Maybe it means that some of us, or a lot of us, will go out of Denv and live a different kind of life. That's why I've clawed my way up. That's why I need a young man who can claw with the best of them. Tell me what you think."

"I think," said Reuben measuredly, "it's magnificent—the salvation of Denv. I'll back you to my dying breath if you'll let me."

May smiled tiredly and leaned back in the chair as Reuben tip-toed out.

WHAT luck, Reuben thought —what unbelievable luck to be at a fulcrum of history like this!

He searched the level for Rudolph's apartment and gained admission.

To the general, he said: "Sir, I have to report that your friend May is insane. He has just been caving to me, advocating the destruction of civilization as we know it, and urging me to follow in his footsteps. I pretended to agree—since I can be of greater service to you if I'm in May's confidence."

"So?" said Rudolph thoughtfully. "Tell me about the double. How did that go wrong?"

"The bunglers were Selene and Almon. Selene because she alarmed me instead of distracting me. Almon because he failed to recognize her incompetence."

"They shall be brainburned. That leaves an eighty-ninth-level vacancy in my organization, doesn't it?"

"You're very kind, sir, but I

think I should remain a May's man—outwardly. If I earn any rewards, I can wait for them. I presume that May will be elected to wear the five stars. He won't live more than two years after that, at the rate he is taking drugs."

"We can shorten it," grinned Rudolph. "I have pharmacists who can see that his drugs are more than normal strength."

"That would be excellent, sir. When he is too enfeebled to discharge his duties, there may be an attempt to rake up the affair of the double to discredit you. I could then testify that I was your man all along and that May coerced me."

They put their heads together, the two saviors of civilization as they knew it, and conspired ingeniously long into the endless night.

—SIMON EISNER

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